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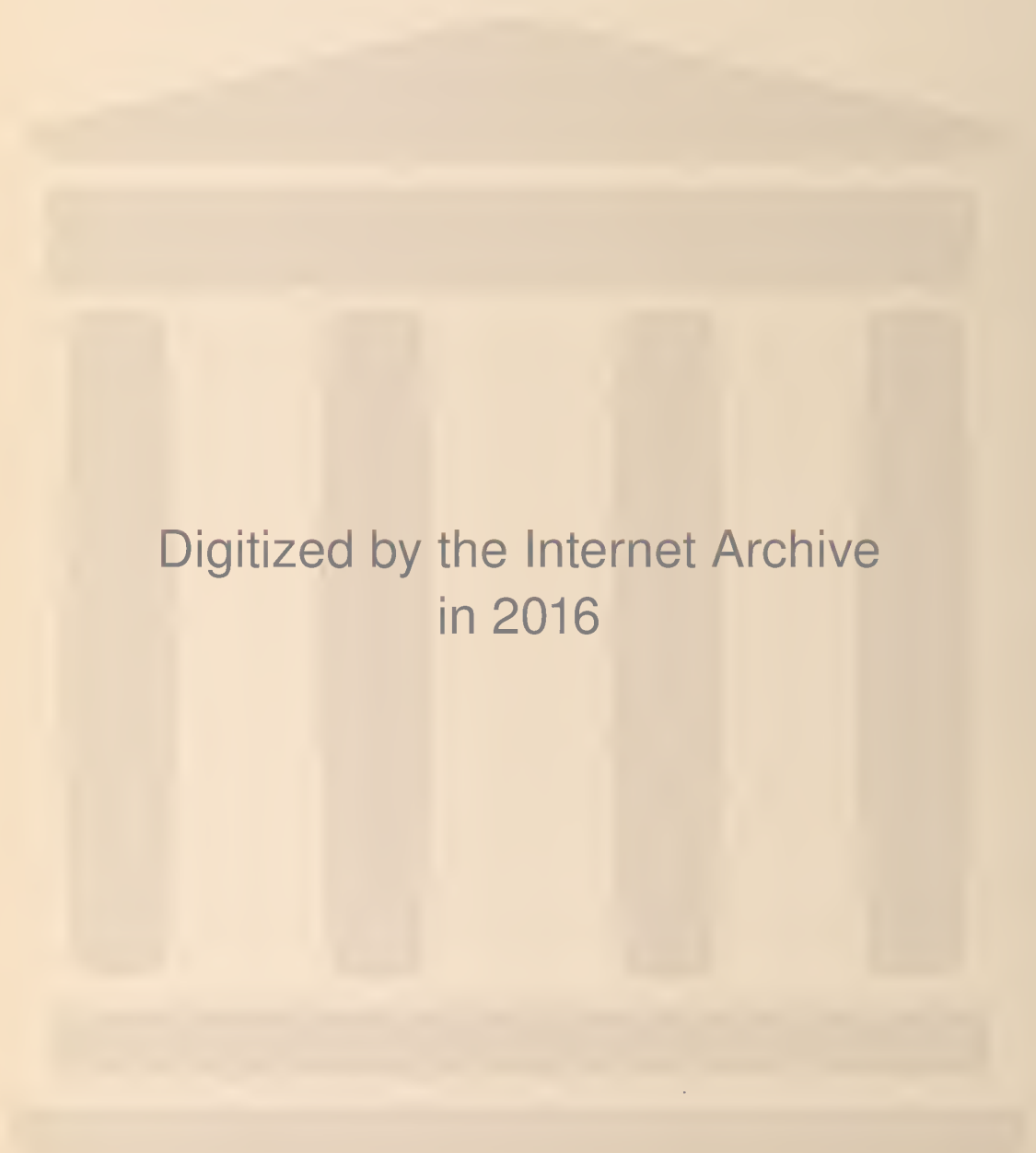
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—Maine MEDICAL JOURNAL



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Vol. XXIII

January, 1932

No. 1

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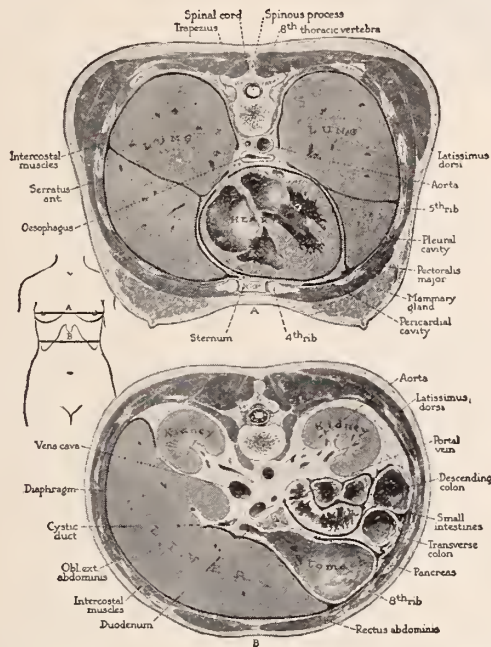
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Maine Medical Journal

The Official Organ of

The State and County Medical Societies

Vol. XXIII

Portland, Maine, January, 1932

No. 1

Editorial

Forensic Medicine

As Prescott says in an early chapter discussing the civilization of the Aztecs and the government of ancient Tezcuco, "It is easier to make good laws than to enforce them; and the best laws badly administrated are but a mockery."

The laws of Maine governing the disposition of dead bodies and procedure in the matter of investigation, cause and manner of death are perhaps adequate; certainly they are better than those that obtain in many modern states, both in this and other lands. Our practice under the law falls far short of guaranteeing that degree of protection to society which a modern state should have.

If it is of importance to determine the exact cause of death in the case of persons found dead in order to determine the manner of death, whether suicidal or accidental, criminal or otherwise, or the result of foul play, no effort should be spared to answer this question, *i. e.*, exact cause of death in the most authoritative way.

Here lies the weakness of our procedure. The doctor must answer this question, but the average doctor is not, and never will be, qualified to solve the problem when the solution must so often depend upon the findings

of a complete autopsy checked by the pathologist, toxicologist, chemist and other specialists. The sole source of authoritative opinion and decisions, including reliable interpretations of autopsy findings, to-day is the well-equipped pathological department of the modern hospital.

The first and most important step to improve the situation in Maine is to recognize this undoubted fact. In Portland, Lewiston and Bangor are general hospitals, which, with some encouragement and support from the profession and the State Health and Welfare Department, might so develop their already efficient pathological departments as to soon serve as centers where all autopsies and special examinations involving medico-legal questions might be performed. Proper co-operative effort of the medical and legal professions and the Department of Health and Welfare could bring about this first important step at a minimum of cost, for no new agencies are needed to effect some such arrangement.

We feel confident that the medical profession of Maine might be of far greater service to the state and to the legal profession in solving some of the questions which arise when a dead body is found.

The Annual Session of 1932

The 1932 meeting of the Maine Medical Association will be held at Rangeley Lakes, June 16th, 17th and 18th. This promises to be one of the best, if not the best, of any of the annual meetings. The accommodations at the Rangeley Lake House leave nothing to be desired. In addition to being able to take care of the members attending without undue crowding, there is every facility there both for entertainment and for properly taking care of the various sessions. There is probably no other house in the state which seems to adapt itself so well to the type of meeting planned for this coming year. The hotel will take care of all reservations itself and will book them in order of receiving them. This will be strictly adhered to, so that members making prior reservations will be assured of the best. While cards will be sent out later to the membership, these reservations may be made at any time by writing to the Rangeley Lake House, Rangeley, and all such requests will be numbered in order of their arrival and filled accordingly.

The program as adopted for this year will be considerably different from previous years. It will cover two and a half days instead of two full days, as formerly, closing at noon on Saturday. The two afternoon sessions and the closing session Saturday morning will be given over to papers, while the two morning sessions, Thursday and Friday, will be devoted to a series of group round-table conferences, covering a variety of subjects. It is planned to make these the feature of the program. Thursday evening will be devoted to social affairs, with some interesting entertainment for all. The annual banquet will come Friday evening. All afternoon sessions will close at 4.00 P. M., so that ample time may be had for golf and other recreations.

The papers will be about twelve in number, four to a session. All the papers will be of general interest, based upon some phase of diagnosis and aimed to assist the general

practitioner in a practical manner. Dr. Elliott Cutler, Professor of Surgery at Western Reserve and Chief Surgeon at Lakeside Hospital, Cleveland, will be one of the guest speakers. Dr. Cutler is one of the outstanding figures in surgery in the world to-day, and Maine is very fortunate to be able to secure him on this occasion.

The conferences will be about forty in number, and each will be limited to sixteen men. They will cover a variety of subjects, so that everyone will be able to pick out just what interests him the most. They will include different phases of surgery, medicine and obstetrics, as well as the various specialties, such as X-ray, ophthalmology, otolaryngology, pathology, psychiatry, etc. Ten conferences will be running simultaneously, that is, ten will start at 9.00 A. M. and run to 10.30, when ten more will go on. The next day a new series will be given. These conferences will each be in charge of a leader who is especially qualified to handle it. While they are, of course, instructional in nature, it is hoped to get free discussion of any points which may come up, and this will be encouraged by the leaders. It is felt that this system, which has proven so popular and worth-while in some of the national societies, will fulfil a long-felt want in our association. Everyone will find something in which he is vitally interested and will be able to discuss it with others similarly interested. A complete list of the conferences will soon be announced in the JOURNAL. Applications for each conference can be made to the committee and will be filled in order of their receipt.

FREDERICK T. HILL,
for the Committee.

Advisory Council of Health and Welfare

In recording the decision of Dr. Sylvester to reconsider the acceptance of his nomination by the Governor as a member of the Advisory Council of Health and Welfare for six years, we are also satisfied that in Dr. Ernest V. Call, President of our Association, who succeeds him, the profession and the health and welfare interests of the state will be well represented.

**The Use of Large Doses of Sodium Thiosulphate in Acute Mercurial Poisoning*

Ten Cases with No Deaths

By E. R. BLAISDELL, M. D., F. A. C. P., Physician, Maine General Hospital, Portland, Me.

Ravaut,¹ in 1920, was the first to call attention to sodium thiosulphate as an effective therapeutic agent in metallic poisoning. In 1923, McBride and Dennie² introduced it in this country. They stated that our textbooks for years had ignored the fact that non-metallic sulphur is a precipitant for a whole group of metals, such as mercury, arsenic, lead, bismuth, zinc and copper. Pure sulphur cannot be used, but its derivatives can. Chief among these is sodium thiosulphate. The latter converts all these toxic metals into the non-toxic insoluble sulphides.

Loeser's Laboratories,[†] in making their intravenous solution of sodium thiosulphate and testing its toxicity, state: "Ten c. c. of Loeser's Intravenous Solution of Sodium Thiosulphate contain 1 gram (15 grains) of the salt. Since 10 c. c. is the normal human dose per 70 kilos body weight, the normal dose per kilo is 0.143 c. c. The normal dose per 100 grams body weight, therefore, is 0.0143 c. c. Fifty times this dose would be 0.71 c. c. for every 100 grams body weight. White rats have survived 100 times this normal dose. We have, however, established a standard biological test at 50 times the normal dose, of which the following is an example:

Weight of Rat.	Dose.
100 gm.,	.71 c. c.
120 gm.,	.85 c. c.
135 gm.,	.96 c. c.
140 gm.,	1.00 c. c.
150 gm.,	1.07 c. c.

All survived."

From the foregoing, it is evident that the level of safety in the administration of sodi-

um thiosulphate in the human being is many times the so-called normal dose of 10 c. c. (1 gram of the salt).

Time will not be spent in describing the familiar symptoms and clinical findings of acute mercurial poisoning. We have all seen the gastroenteritis, the dreaded gradual suppression of urine and the heavy albuminuria, followed by death, from a necrotic nephrosis within one to two weeks after the poison was taken. Sodium thiosulphate has been used in the Maine General Hospital, in the treatment of acute mercurial poisoning, since 1928. In spite of this, our death rate, prior to September, 1930, was 33%. The reason for this is now evident, our doses were too small. One to two grams daily was the recommended dosage, and this was the amount that we were using.

In the latter part of June, 1930, a few days after the death of a patient from bichloride of mercury poisoning, I met Dr. Benjamin Foster, attending syphilologist, in the corridor of the hospital. He had heard of the death and asked about the size of the dose of sodium thiosulphate used. When I told him, he remarked that he believed that the amount used was too small. He was using much larger doses in arsenical poisoning with excellent results. I informed the other members of the medical staff of Dr. Foster's experience with the larger doses, and it was decided that every patient with acute mercurial poisoning should receive at least six grams of sodium thiosulphate intravenously daily for three consecutive days. Since then, we have had ten cases with no deaths. Sodium thiosulphate may be given

*Read at the monthly staff meeting, Maine General Hospital, December, 1931.

†The writer wishes to state that the Maine General Hospital is under no obligation to Loeser's Laboratories and has no desire to advertise the products of any one manufacturer. Loeser's sodium thiosulphate was the brand used, as it happened to be in stock at the time during which these patients were treated.

by mouth, but we feel that, given by this method, it is probably less effective.

In the following report, it will be noticed that a majority of the patients were in the hospital for only a few days, but all were "followed up" long enough to make us feel certain that they did not die of acute mercurial poisoning.

REPORT OF CASES

Case 1.—Everett D., aged 51, was admitted September 19. He had taken six bichloride of mercury tablets (7 3-10 grains) two hours before. The stomach tube could not be passed, and he was given whites of eggs, vomiting one hour later. Six grams of sodium thiosulphate were given intravenously daily for three days. Discharged on September 24, 1930.

Case 2.—Mary B., aged 21, was admitted November 5, 1930. She had taken two bichloride of mercury tablets two hours before. Six grams of sodium thiosulphate were given intravenously daily for three days. The patient signed a release and left the hospital November 9, 1930.

Case 3.—Helen C., aged 21, two months pregnant, was admitted on December 27, 1930. Three tablets of bichloride of mercury had been taken three hours before admission, but she had vomited one hour after taking the tablets. Six grams of sodium thiosulphate were given intravenously daily for five days. The patient miscarried spontaneously. She developed bleeding gums, hematemesis and a bloody diarrhoea. This gradually subsided after a week. Although the urine contained large amounts of albumin and casts during the first week, there was no suppression and the patient was discharged on January 17, 1931, with a negative urine and feeling well.

Case 4.—Arlene H., aged 22, was admitted on January 18, 1931. One tablet of bichloride of mercury had been taken four hours before admission, but she had vomited thirty minutes later. Six grams of sodium thiosulphate were given intravenously daily for three days. Bloody stools were present for

one day, January 19. She signed a release and left the hospital on January 22, 1931.

Case 5.—Helen McL., aged 19, was admitted on February 21, 1931. She had taken one tablet of bichloride of mercury one hour before admission and had not vomited. Her stomach was washed at once and six grams of sodium thiosulphate were given intravenously daily for three days. She signed a release and left the hospital on February 25, 1931.

Case 6.—Naomi C., aged 25, was admitted on March 20, 1931. One tablet of bichloride of mercury had been taken two hours before. She vomited on admission. Six grams of sodium thiosulphate were given intravenously daily for five days. A bloody diarrhoea was present on the second and fourth days in the hospital. She was discharged on March 28, 1931.

Case 7.—Eunice B., aged 29, was admitted on May 7, 1931. She had taken three tablets of bichloride of mercury three hours before admission and had not vomited. Her stomach was washed and one gram of sodium thiosulphate was introduced through the stomach tube. Six grams of sodium thiosulphate were given intravenously daily for four days. One kidney had been removed two years before, following an accident. She was discharged on May 14, 1931, with a negative urine and feeling well.

Case 8.—Helen C., aged 26, was admitted on May 20, 1931. She had taken two tablets of bichloride of mercury four hours before admission and had not vomited. Her stomach was washed and one gram of sodium thiosulphate was introduced through the stomach tube. Eight grams of sodium thiosulphate were given intravenously daily for four days. A heavy albuminuria was present on the second, third and fourth days in the hospital, but there was no suppression of urine. She was discharged on May 29, 1931, with a negative urine and feeling well.

Case 9.—Alta M., aged 17, was admitted on April 1, 1931. She had taken one tablet of bichloride of mercury four hours before admission and had not vomited. Her stom-

ach was washed and one gram of sodium thiosulphate was introduced through the stomach tube. Six grams of sodium thiosulphate were given intravenously daily for three days. She signed a release and left the hospital on April 5, 1931.

Case 10.—Julia B., aged 33, was admitted on April 1, 1931. She had taken two tablets of bichloride of mercury two hours before admission and had vomited one hour after taking the tablets. Six grams of sodium thiosulphate were given intravenously daily for three days. She was discharged on April 10, 1931.

I have found only one other report in the literature of a series of patients with acute mercurial poisoning who were treated with large doses of sodium thiosulphate. A Swedish clinician, whose name I cannot recall, reported during the past year a series of twenty-three consecutive patients, with 100% recoveries. He used from eight to

twelve grams intravenously daily, for from three to five days.

We feel that the present dosage of sodium thiosulphate advised in the treatment of acute mercurial poisoning is much too small, and that at least six grams of the drug should be given intravenously on at least three consecutive days. All of our patients have entered the hospital very soon after the poison was taken, but I believe that this is generally true of all patients who have taken bichloride of mercury internally, by accident or with suicidal intent. Of course, the longer time that has elapsed after the mercury is taken and before the treatment is started, the less effective the treatment. Yet one should not hesitate to use sodium thiosulphate in good-sized doses, no matter how late the treatment is started.

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**Atelectasis and Massive Collapse of the Lung*

By EDWARD H. RISLEY, Waterville, Me.

A considerable amount of literature has appeared during the past few years on these two subjects, and, as much of this has dealt only with the theoretical side, it is probably true that the ideas of most of us are perhaps still a bit hazy, especially in regard to etiology and treatment. Therefore it has seemed to us that the effort to clarify the subject by a short and concise paper might be of some value.

Definition:

The word atelectasis, a Greek derivative, means "imperfect expansion." This condition may be confined to an extremely small area of lung tissue, producing no symptoms or signs at all, or it may affect the whole lung, producing a massive collapse, and evi-

denced by signs of an acute catastrophe in the chest. Therefore it is evident that atelectasis and massive collapse are not, and should not, be thought of as synonymous terms. A lung may have all degrees of atelectasis, but massive collapse does not take place until enough air is shut off to *completely* collapse the whole lung structure. Massive collapse and *complete* atelectasis are synonymous terms, however. The lesser degrees of atelectasis probably always go unrecognized, and even the larger involvements *may* also be unrecognized, because they sometimes produce none or only slight and transitory symptoms.

There exists a further reason for trying to clarify this subject. It is this: Increasing investigation shows that, in practically all of

*Read before the Knox County Medical Society, May 12, 1931; read before the Franklin County Medical Society, August 1, 1931; read before the Kennebec County Medical Society, December 17, 1931.

the big clinics of the world, post-operative pulmonary complications are being discovered, through autopsy findings, to be the predominating cause of post-operative deaths, and especially of otherwise unexplained deaths. It therefore behooves us to be able to differentiate these various pulmonary complications, both in order to more effectively treat our post-operative cases and also to be able to establish an early prognosis when one of these chest catastrophes faces us.

Etiology :

The most fascinating part of this subject is the etiology, which has been heatedly discussed for over one hundred years. The condition was first described in infants dying shortly after birth, of asphyxia, and later by Pasteur, who found it mostly in patients dying of diphtheritic paralysis. He thought that it was caused by paralysis of the respiratory muscles, particularly the diaphragm. The condition, as a post-operative complication, however, was not described until 1907. Since then the rôle of some form of bronchial obstruction, as the main cause of atelectasis, has been given increasing importance. Elliott and Dingley were the first to stress the importance of the obstructing bronchial secretion of a peculiar viscid character, differing in type from that in pneumonic sputum, as the cause of atelectasis, and even more convincing evidence of the importance of this secretion was first given by the bronchoscopic work of the Chevalier Jackson clinic in Philadelphia, where cases were first cured by the bronchoscopic removal of the secretion. That bronchial obstruction, however, is not the *only* causative factor has been amply proven by autopsy findings in cases of sudden death, during operation, in which bilateral massive collapse has been found, but absolutely no excessive secretion has been demonstrated in the bronchi.

Other recognized contributory factors are: Limitation of respiratory movements, either from prolonged prone position in bed, cramped position on the operating table, or prolonged sepsis. Such restriction of res-

piration at first favors the collection of mucus in the smaller bronchioles, and later aids in bringing about the different degrees of atelectasis.

Incidence :

The employment of X-ray studies of chests before operation, and at regular intervals post-operatively, has disclosed the fact that varying degrees of atelectasis may, and often do, occur in patients who display no symptoms at all, which would lead one to suspect the presence of these complications.

Scott states that of all patients operated upon, about 3% develop some type of pulmonary complication, and one in every two hundred operations results fatally from this cause. The mechanism of collapse probably plays an important rôle in the production of later pulmonary complications, and Elwyn concludes that most cases of post-operative pneumonia arise in atelectatic areas. This is one phase of the subject, however, which is as yet not clearly understood, and about which opinions vary widely.

It is quite conceivable that it might be very difficult, clinically, to distinguish a small area of lung involvement caused by atelectasis from that caused by a small infarct, and on this point the advocates of the infarct theory in the causation of pneumonia differ with those who accept the more recent theory of atelectasis. This is a question which evidently cannot be settled until much more experimental work has been done on these two conditions.

Symptoms :

The onset of any marked degree of atelectasis—enough to give definite symptoms—occurs generally from a few hours up to seven to twelve days post-operatively, and may be of varying degrees. The onset may be *so* sudden and *so* acute as to closely simulate, and may easily be mistaken for, pulmonary embolism, acute dilatation of the heart, or the rapid onset of a fulminating pneumonia.

The most characteristic and constant symptom is sudden pain in the chest. This

is rapidly followed by dyspnoea, cough with tenacious sputum and cyanosis. Immediate cyanosis following operation should make one suspicious of massive collapse. Temperature, pulse and respiration rise rapidly, and may be the only premonitory signs of the impending collapse. Expectoration may be a late development. These physical signs are *not* pathognomonic and are common to several other post-operative pulmonary complications. Massive collapse, however, can be differentiated by its physical signs, and it is agreed that the most commonly constant and pathognomonic sign is displacement of the heart *to* the affected side. This, with unilateral dullness, is not known to exist in any other acute chest condition. The breath sounds over the affected area may be greatly diminished, absent altogether, or bronchial in character. With the patient flat on his back marked asymmetry of the chest is noted, the respiratory excursion being definitely limited on the affected side.

In three-fourths of the post-operative cases the massive collapse has occurred in the right lung, and it is generally the base that is most extensively involved, there usually being an area at the apex which is relatively clear.

Our most valuable clinical aid is the X-ray, the findings of which are very typical as a rule. The cardinal signs of massive collapse, Roentgenologically, are *elevation* of the *diaphragm* on the involved side, heart, mediastinum, and trachea displaced *toward* the affected side, contraction of the ribs on that side, and lung shadow. It is not necessary to have all of these signs on the plate at the same time. One or the other of these findings may predominate, and be sufficient for diagnosis.

The diagnosis of a pneumonia or bronchopneumonic process on the X-ray film of any *immediate* post-operative chest complication should be looked at askance. It is much more likely to be an atelectatic process.

Respiratory symptoms do not usually last more than a few days. The elevation of

temperature lasts from a few hours to about eleven days, and the physical signs usually begin to clear up with the symptomatic improvement. Complete disappearance of all intrathoracic signs often takes two weeks or more. No case of typical unilateral collapse of the lung, reported in detail to date, has been fatal unless complicated by pneumonia or some other form of lung infection.

The condition terminates in one of three ways, by (1) lysis; (2) crisis; or (3) complication. The usual course is by lysis, during which course râles are likely to be heard in both sides of the chest. Most of the cases that have recovered by crisis have done so in a very short time, and generally after coughing up some very tenacious mucus. A condition not clearing up within two weeks generally means some septic complication.

Differential Diagnosis:

Undoubtedly most of the unrecognized cases are called pneumonia, as the pulmonary signs may exactly resemble a lobar pneumonia or a confluent bronchopneumonia, except for the absence of subcrepitant râles.

As stated above, the acute onset has often been diagnosed as pulmonary embolus or acute dilatation of the heart, but a few hours later the condition is generally defined enough, to the careful observer, to be easily differentiated from these two conditions, especially if an X-ray be taken. Aside from the confusion of the first few hours of an attack, the condition is not so hard to diagnose until it has reached the intermediate stage of either beginning to clear up or to become complicated by a pneumonic process, provided one is on the lookout for it and *always* suspects it in any post-operative chest complication. But when it has reached the intermediate stage the condition *is* difficult to diagnose, because the signs are often most confusing. It is at this particular stage that careful physical examination and X-ray evidence is of the greatest value. The height of the diaphragm and the position of the heart are often the deciding factors.

One of the striking characteristics of post-

operative atelectasis is that the large area of pulmonary involvement and a marked cyanosis contrast sharply with the lack of apparent toxicity. A pneumonic patient with the same signs would be critically ill. Diffuse bronchitis, bronchopneumonia and pleurisy, with effusion, occur post-operatively, but the clinical course is also different, and a diagnosis can usually be made within a few days. If one can diagnose atelectasis or massive collapse he can practically always give a favorable prognosis. These cases complicated by a bronchopneumonia are the fatal ones, and are most likely due to infarction in an atelectatic area.

Predisposing Factors:

These are probably many and differ in different individuals and in diverse circumstances. The condition has followed even the most trivial injuries, and it may *not* follow even very extensive operative procedures of the type in which it might be expected. The very young or the very old and debilitated are prone to have this complication, as they do others. The male sex predominates. Previous lung diseases are not necessarily a predisposing factor. The length of time on the operating table does not seem to have so much effect as the position. A prolonged Trendelenberg is not good, or any cramped condition of the chest. In Brun and Brill's series, gastric resection had a high incidence of atelectasis, and Scott reports an interesting case in which a massive collapse occurred in the dependent lung in a nephrotomy case, and when the opposite side was done at a later period, this same patient had a collapse on the then dependent side.

That the post-operative position of the patient may be a factor in the production of atelectasis is generally agreed, as is also the necessity for frequent postural changes. It has been found that with the patient in Fowler's position there is the least impediment to free respiration and the vital capacity is increased, and this position should be maintained whenever practical, with frequent changes in position from side to side.

Undoubtedly the use of the bronchoscope in the diagnosis and treatment of atelectasis has greatly extended our knowledge of the condition. Its value in diagnosis and in treatment cannot be overestimated. Bronchoscopically, cases can be grouped in three main types. First, those in which the bronchus is found obstructed either with a plug or with the characteristic tenacious sputum; secondly, another group in which there is no complete obstruction, but a rather profuse purulent secretion, not so tenacious as the typical viscid type, and, thirdly, one may find practically no secretion at all. In this latter type, however, there is always the possibility that in the process of bronchoscopy the plug has been expelled.

Prevention and Treatment:

Probably the most efficacious method of prevention is the use of CO₂ induced hyperventilation, post-operatively. This method of deoxygenating patients was suggested by Henderson *et al* in 1902 and was later used by Sise as a preventive for post-operative pneumonia, and later still by Cutler as a prophylactic against atelectasis. Hugh Cabot (S. G. O., January, 1931) says: "CO₂ is the most important single contribution to the safety of anesthesia recently made." The routine procedure carried out at present in many of the larger clinics of the country is to give post-operative cases (whether done under general or local anesthesia) inhalations of CO₂ three times a day after operation for the first three or four days, supplementing this by frequent changes in position in bed and the Fowler's position when possible. (N. B. Posture in giving CO₂ should be with affected side *up*, so as to get best possible drainage.) If improvement is not obtained within a few hours by this means, and there is evidence from the signs and the character of the sputum that there is probably a plug present, then bronchoscopy is indicated.

Prognosis:

All observers have noted that many of these patients get well without any treat-

ment (Control series of Scott). The scarcity of autopsy reports in this condition is due undoubtedly to its very low mortality.

We might briefly summarize our present knowledge of this condition as follows: 1. The predominating post-operative pulmonary complication is atelectasis. This may be of any extent, from involvement of very small portions of the pulmonary parenchyma to a whole lung or even both lungs. Bronchial obstruction is the most important single factor in the production of atelectasis, and with the relief of the obstruction the lung tissue reinflates. There are pre-operative, operative and post-operative factors, such as prolonged sepsis, prone position, cramped position of the chest and restricted respiratory movements, which predispose to the development of this condition. Intra-bronchial drainage by posture and the hyperventilation by CO₂ are important aids in treatment, and, in fact, constitute the whole treatment with the possible exception of bronchoscopic removal of mucous plugs when the above methods fail. Prognosis is good. The finding of elevated diaphragm, restricted respiratory movements on the affected side and a heart displaced *toward* the affected side, either clinically or by X-ray, are pathognomonic of this condition.

The description of a recent case with typical history and findings, but with an unusual outcome, may be of interest from a practical point of view.

A male, 33 years old, who gave no history either of previous lung infection or of indigestion, was taken at 10.00 A. M. with sudden agonizing epigastric pain, nausea and vomiting. As he was many miles away, working in a lumber camp, it was not possible to secure a physician until 3.00 P. M. A diagnosis of acute appendicitis was made and the patient sent to the hospital, which he did not reach until 8.30 P. M.

Examination showed a very robust man, in pain, temperature 100, pulse 90, respiration 20, an absolutely board-like abdomen, generally tender, an entirely negative chest, and a white count of 17,500. A diagnosis

of perforated gastric or duodenal ulcer was made, and immediate operation advised and accepted.

At operation a large perforation was found on the anterior surface of the first part of the duodenum, and a considerable soiling of the right flank by escaped gastric contents. The perforation was closed with four infolding, No. 1 C. C. G. sutures and the abdomen closed (to one cigarette drain), after removing a rather thickened and congested appendix.

He also had an irreducible right scrotal hernia, which apparently was causing him no present trouble.

He was seen at 8.30 the next morning, was comfortable and had a temperature of 99.2, pulse 80, respiration 20.

At 11.30 A. M. he was taken with rapidly increasing pain in the right side of the chest and was found to have a temperature of 103.4, pulse 140, respiration 40, a great deal of dyspnoea, flushed cheeks and a dry, hacking cough. The abdomen was moderately distended and he was the picture of a patient in great respiratory distress. Examination showed practically no respiratory excursion of the chest wall on the right side, totally absent breath sounds in the right lower lobe, absolute flatness to percussion from the fourth interspace downward and displacement of the heart 3 c. m. toward the right. Because this man was in the old part of the hospital, to which it was impossible to move the hospital portable X-ray, and because he was too sick to move, an immediate X-ray was not taken, but a diagnosis of massive collapse of the right lower lobe was made and confirmed later that day by my medical consultant.

For the first eighteen hours this man was the picture of the most acute respiratory distress. However, at the end of this period his pulse, temperature and respirations gradually came down and were practically normal within ten days.

The subsequent history is interesting because of one rather unusual complication. At the end of two weeks the patient began

to have a daily afternoon rise in temperature—up to 100 or a little over—had a hacking cough without sputum, and it seemed to me his lower right chest was even more dull than before, and that the breath sounds did not go down so far as previously. I suspected fluid, did a tap, but got no fluid. The patient was then moved to the new part of the hospital and an X-ray taken, which showed no fluid, but what suggested unresolved pneumonia, and the high fixed diaphragm, which is characteristic of massive collapse. The next afternoon he had a further rise in temperature, pain in his irreducible scrotal hernia, nausea and vomiting, with no results from several enemata. It was evident that he had an acute obstruction due to his hernia. He was operated upon that evening under novacaine and a very unexpected condition found. On opening the sac, a loop of small intestine was found firmly adherent to the lower part of the sac by dense old adhesions. There was, in addition, a large amount of recent inflammatory tissue, and in trying to get a line of cleavage to free the intestine, a large abscess cavity was broken into which contained thick greenish-yellow pus, and was later found to come from an old abscess involving the epididymis.

The condition of the intestine was such that a resection of six inches was necessary to effect a cure. An end-to-end anastomosis was done, the hernia repaired, and the wound closed with drainage. The man made a rapid and satisfactory recovery from this emergency operation, his temperature came down to normal, and he progressed smoothly for another two weeks.

At the end of this period he again started an afternoon rise of temperature up to 100° to 101°. Signs in his chest did not change materially, but cough increased, and one was not able to tell clinically just what was going on. A second series of X-rays, however, gave us the diagnosis, but it was not

until a lateral view was taken that the condition was clear. A diagnosis of encapsulated empyema, centrally located, was made and operation advised. This the patient refused. After two weeks his temperature dropped to normal, following a day in which he spat up nearly sixteen ounces of pus, and he was discharged after having sustained a normal temperature for one week. He had one other coughing spell, in which he got up the same amount of pus, at the end of ten days after discharge.

He was seen five days ago, eight months since leaving the hospital. He had no further coughing spells, has gained fifteen pounds, looks and feels fine.

Complete Diagnosis:

Perforated duodenal ulcer.

Post-operative massive collapse of the lower lobe of the right lung.

Intestinal obstruction from intestine adherent to old abscess of epididymis.

Intestinal resection with end-to-end anastomosis.

Encapsulated empyema, rupturing a bronchus.

Recovery.

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Traction with Rustless Steel Wire

By E. STANLEY HALL, Portland, Me., Orthopedic Surgeon, Maine Eye and Ear Infirmary

Many times it is desirable and necessary to have traction on the fingers for fractures and dislocations of the phalanges and metacarpals. Adhesive plaster traction and a banjo splint is usually satisfactory. The woven basket, or old-time "Indian Puzzle," will serve in some cases, but it must be watched to see that it does not interfere with the circulation. When the part to be treated is a distal phalanx, there is not enough space to apply any kind of traction other than that which goes through the finger.

Recently, a compound fracture and dislocation of the distal phalanx of the thumb was treated in this manner. Several attempts

her work as a clerk. All pain in the finger stopped as soon as the traction was applied.



FIG. I—Radiograph. Fracture before reduction.

at reduction had been made, but the dislocated phalanx would not remain in place. Under gas anesthesia (novocain should have been used, but the patient would not permit it), a loop of rustless steel wire was inserted through the pulp of the finger and attached to the splint. The reduction was accomplished easily and remained in place with very little traction. The wire was left in about three weeks.

The pictures explain themselves.

The patient has not lost any time from



FIG. II—Radiograph. Fracture after reduction.



FIG. III—Splint with traction applied.



The Genesis of Social Insurance

BY EDWARD H. OCHSNER, M. D., Chicago, Illinois

To the Editor of the Maine Medical Journal:

For a number of years I have been convinced that Social Insurance is one of the most important problems confronting the civilized nations of the world and that Compulsory Health Insurance, a branch of Social Insurance, is the biggest quasi-medical question before the medical profession of this country to-day. Acting on this belief, I have prepared several short articles which consider the problem from its political and economic effects upon society in general. If these articles are well received, it is my intention to follow them at a later date with a series of articles considering the effects of such legislation upon medical practice.

Social Insurance is the hybrid offspring of impracticable sentimentalism and political expediency. It is an epidemic disease first observed in Germany about fifty years ago, which has gradually spread and infected a considerable number of the nations of the earth, and now has arrived at our very doors. Unless we succeed in establishing a rigorous quarantine of enlightened public opinion, it will surely gain a foothold in this country in the not distant future.

Social Insurance consists of the following subdivisions or parts: Compulsory health insurance, old age pensions, widows' and orphans' pensions, and unemployment pensions or doles. In none of the countries were they all adopted at the same time. Germany adopted compulsory health insurance in 1883, and all of the other forms since that time. Austria adopted compulsory health insurance in 1888; Hungary, in 1891. England adopted old age pensions first and compulsory health insurance in 1911, and the others subsequently. In this country some of the states have adopted old age pensions and some widows' and orphans' pensions, but so far none have adopted compulsory health insurance, for which negative blessing let us raise our voices in thanksgiving.

When the scientific physician is confronted with the problems presented by a new patient, he meets the situation in the following manner: He obtains a complete family and personal history in order to ascertain if possible the causes which have brought about the condition; by his physical examination and laboratory investigations he finds out what variations from the normal have taken place; after all this, he is in a position to

advise and institute the proper treatment. Let us follow the same course in the study of this problem.

During the late seventies a number of German parlor socialists conceived the idea that the state make itself responsible for the medical care of its workers. The sentiment in favor of compulsory health insurance grew rapidly among the workers, and Bismarck, although expressing serious doubts as to the soundness of such a measure, yet feeling that something had to be done in order to appease the clamor of the proletariat and the alarming growth of socialism, adopted social insurance as a government measure, had a bill drafted and enacted into law.

In England, National Insurance, as it is called there, had a slightly different setting, but substantially the same background. In 1910, David Lloyd George, in order to strengthen himself politically, decided the time for such legislation was opportune. Not being able to speak German, he gathered about himself several interpreters, hied himself to Germany, and after interviewing the well-paid heads of the German system, and after having been wined and dined and lionized for two weeks or so, he returned to England very enthusiastic about the whole project, had a law drafted, and later secured its passage. In the recent parliamentary election the Liberty party, of which Lloyd George has been the head for many years, elected just four members to Parliament, or less than one per cent. of the whole number. So while Lloyd George may have saved his political skin by National Insurance in 1911, he certainly lost his hide by it in 1931.

Practically every reform movement attracts

to itself a considerable number of well-meaning, emotionally impressionable, impractical, irresponsible, very vociferous individuals, and very often a group, usually the very ones who manage the propaganda, and who hope to gain some pecuniary benefit from it. Social Insurance is no exception to this general rule.

Some of the common characteristics of reformers is that they want a new law passed for every human ill, and when the law is enacted, they either sit back waiting for the

millenium to arrive or they rush off looking for new evils to correct by new laws, forgetting to see to it that the law just passed is being properly enforced, and forgetting at all times that all laws must depend for their enforcement not upon supermen but upon men often of less than average intelligence and integrity, upon politicians and their henchmen, who are quick to see how these usually unsound and loosely-drawn laws can be converted to their own advantage.

NOTE.—The above is what is actually happening in some of the countries where such laws are in operation, as future installments will show.

Social Insurance Is Contrary to the Fundamental Principles of Democratic Government

By E. H. OCHSNER, M. D., Chicago, Illinois

All forms of Social Insurance are contrary to the spirit of democratic government. They destroy individual incentive, initiative and self-reliance. They substitute paternalistic control for independence of thought and action. We pride and congratulate ourselves on living under a democratic form of government, but most of us fail to realize that we are slowly, but surely, drifting away from the true democratic spirit in government—that we are gradually substituting a hybrid form of government, a cross between bureaucracy and socialism. Personally, I am a firm believer in democracy and believe that many of our present ills are the direct result of already having deviated too far from the fundamental principles of democracy.

Individual responsibility is the foundation of democratic government. If a nation does not educate its citizens to individual responsibility, it will soon have no one capable of assuming public responsibility. Slowly through the ages the common man has risen from chattel slavery and serfdom to independence, freedom and personal liberty, and now some well-meaning but misguided people want to undo

all this. They want to enslave him again, making him, in fact, a bondsman of the state. Organized society is forever forging new chains with which to shackle the free development of its members. It is forever meddling with the private affairs of its citizens. One of the best illustrations of this statement is found in a recent survey of the Citizens' Bureau of Milwaukee, which found that that city is engaged in approximately three hundred different functions, one-fifth of which have been added during the last sixteen years. Milwaukee is no worse in this respect than many other cities in this country. Add to this the activities of the county, state and federal governments, and we find an explanation of the following fact:

"In a period in which the population of the United States has increased ten per cent. the number of persons holding civil office has increased forty per cent. and the amount paid in salaries has increased one hundred and fifty per cent." Thirty years ago one person in every forty-five was in government employ, while now one in every twelve is so employed.

"It is a profound mystery why the people

of the present generation should so violently run after the very things their forefathers so violently ran away from in 1776. One of the chief indictments of King George set forth in the Declaration of Independence reads: 'He has erected a multitude of new offices and sent hither swarms of officers to harass our people and eat out their substance'."

In a recent article, Dr. Harry Emerson Fosdick makes a statement that seems particularly suitable in this connection. He said, "Many of those in society who are dissatisfied with present conditions know what they want to get away from, but they do not know whither they are going." I would add "nor do they seem to have any clear idea as to what they want." Before we adopt new laws we should make reasonably sure that such laws will not introduce new and greater evils than they are expected to cure, that they can actually be enforced, and that they are not likely to be abused in their administration.

A far-reaching innovation such as Social Insurance must be viewed from many angles. We must consider its effect upon the general

public, the insured, the employer, and the medical and dental professions.

If we are deliberately trying to get away from the democratic form of government having a definite objective in view, and if we are reasonably certain that the goal for which we are headed is worth while and is going to result in general social and economic betterment, an experiment with Social Insurance might be justified, but, even then, it is well to carefully weigh and consider what the wise founders of our government had to say on this important subject. I quote from the Declaration of Independence, "Prudence, indeed, would dictate that government long established should not be changed for light and transient reasons." If we as a nation are just aimlessly drifting, as we seem to be, we are almost sure to get into serious trouble. We believe that we shall be able to show conclusively, in future articles, that in those countries in which it has had prolonged and extensive trial it actually has had serious consequences. These latter problems will be taken up in subsequent articles.

Case Record of the Central Maine General Hospital

Edited by JULIUS GOTTLIEB, M. D.; assisted by MAURICE DIONNE, M. D.

CASE I

STOMATITIS, FEVER, GENERAL MALAISE AND LOW WHITE COUNT

PRESENTATION OF CASE

Dr. W. E. Webber: This case is that of an American boy, 10 years old, who entered the hospital June 15th, complaining of a sore mouth, weakness and abdominal discomfort of three weeks' duration. The patient was in good health until May 18th, four weeks before admission. He had been exposed two months previously to typhoid fever and on May 17th had received 1,000 units of diphtheria antitoxin because of a possible exposure to diphtheria. The first symptoms were noted the next day by his mother, who said that he was listless, did not play as usual, had to lie down, and that at times he appeared stuporous. On May 22nd, three and a half

weeks before admission, he complained of a sore throat. Examination revealed a white patch on the left anterior pillar and in the left tonsillar cradle. There were also some slightly raised plaques on his cheeks in proximity to his gums. A smear was negative for diphtheria. The sore throat improved and the patient got up from bed to return two days later, when the patches inside the cheek were more noticeable. He had a high temperature. The skin was cold, and he felt chilly and sleepy. A diagnosis of grippe was made. One week later—June 7th—the patient had not improved and two left lower deciduous molars were extracted. On June 10th, five days before entry, his urine ap-

peared dark and foamy. He had frequency and nocturia twice. his abdomen was distended, and the temperature taken for the first time was 104.5F.

On June 15th, he was admitted to the hospital. Up to the time of his admission there were no respiratory symptoms. The heart rate was said to be rapid. There were no digestive disturbances, though the appetite was said to be poor. There was no nausea, emesis, melena nor diarrhea. It was reported that he had lost some weight.

The family history is essentially negative. One sister, aged seven, had received a similar dose of antitoxin with no untoward effect.

The patient follows the usual routine of a normal school child. He had received cod liver oil and orange juice daily.

The past history is negative except for an adenotonsillectomy two years ago.

Upon admission, physical examination showed an ulceration in and about the sockets of the two extracted teeth enveloped by a grayish exudate. A submaxillary gland was palpable on the right. Abdomen was protuberant and somewhat tense. Liver edge was easily palpable three fingers below costal margin and spleen was palpable 3 cm. below the costal margin. Several discrete raised, reddish to pale-pink, patches 1 cm. in diameter are distributed over the face, arms and abdomen; these do not fade at pressure. Admission temperature is 102°, pulse 95 and respiration 24. Urinalysis is negative except for an s. p. t. of albumin. Leukocytes are 2,900 with 56 neutrophils and the remainder lymphocytes.

Soon after entry, blood cultures, Widal and Brucella abortus agglutination tests were done, as well as frequent blood morphological studies. From the time of admission up to July 7th, the temperature swung from 101° to 104° with the excursion diminishing during the last five days to a plateau at 104°F. The pulse rate gradually increased to about 150. The leukopenia became more marked and on July 7th was 1,600, with a polymorphonuclear percentage of 65. These findings are shown in tabular form, in Table I. The liver increased in size to the iliac crest and the spleen the size of a grapefruit became easily palpable 7 cm. below the costal margin. The face, and particularly the eyelids, became edematous. The ulceration of the lower

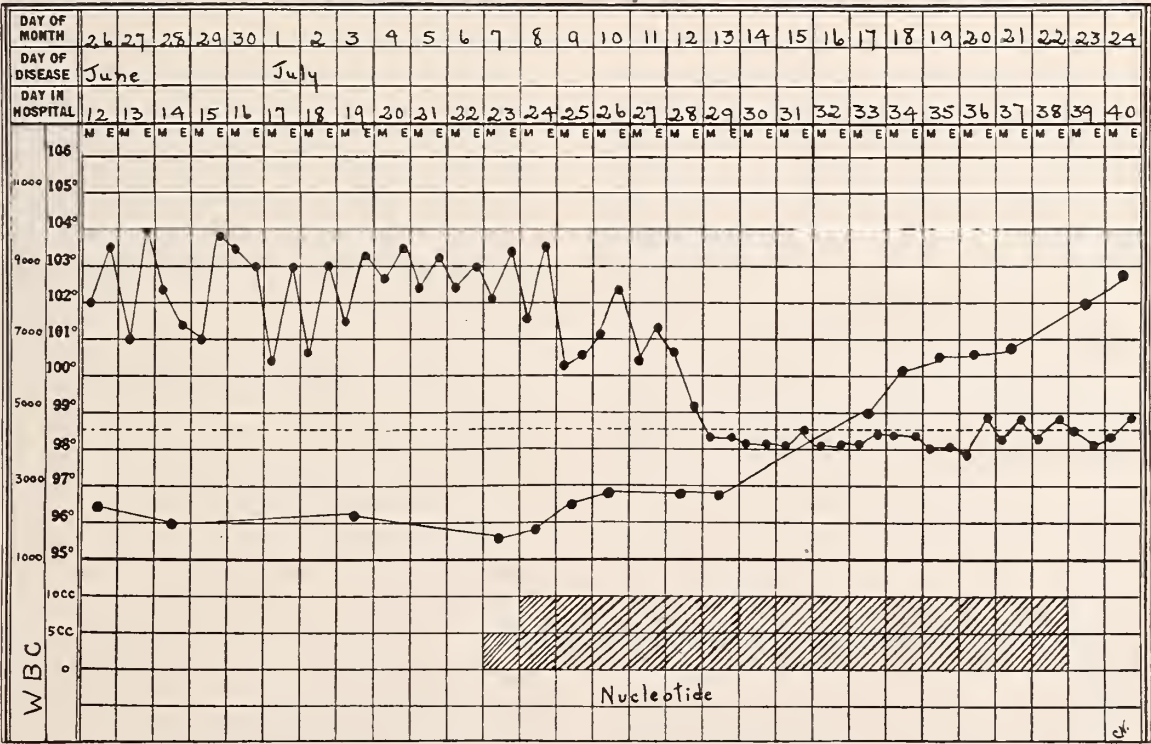


TABLE I.

jaw became more pronounced, and a smear taken July 5th showed numerous fusiform bacilli and spirillæ. The urine showed a slight trace of albumin and many fatty and waxy casts. The patient was seen July 6th in consultation.

CLINICAL DISCUSSION

Dr. W. E. Webber: The general symptomatology and the rash resemble the reactions to antitoxin that we used to see many years ago following its use.

Dr. E. C. Higgins: General malaise, fever with a pulse failing to rise in proportion, together with distended abdomen, made us consider typhoid and Widal tests are therefore indicated. The leukopenia is also quite suggestive.

Dr. J. Gottlieb: The close analogy of typhoid and undulant fever makes it advisable to test for both. The leukopenia goes with either. Widal and Brucella abortus agglutination tests June 16th were negative. Such tests should be positive in about 80% of the cases after the third or fourth week. Blood cultures on three different dates were also negative. So were stool cultures on two occasions. It is reasonably safe to rule out typhoid and undulant fever with such negative laboratory evidence. Von Pirquet and Mantoux tests carried to a 1/100 dilution were negative. These generally rule out tuberculosis, but may be quite negative in an overwhelming infection, particularly in a miliary tuberculosis, in cases that show an entire lack of immunity. Contrary to the general impression, the Von Pirquet and Mantoux tests express an immunity due to an infection rather than a presence of the disease, and for that reason are positive in the vast majority of tubercular infections. We are, therefore, dealing with a case entirely free from tuberculosis or a case in which there is an overwhelming infection of recent origin. Recently there have been many reports of agranulocytic angina. It is, however, difficult to defend this diagnosis in view of the high percentage of granulocytes present in the smear. The absolute number of granulocytes are, however, depressed.

Dr. M. J. Dionne: The distention in the abdomen along with the large liver and spleen

make me think of a leukemia or miliary tuberculosis with amyloid degeneration. I believe that the fact that the Mantoux tests are negative is strong evidence against tuberculosis. One is, therefore, forced to consider this condition a form of leukemia. I have also thought of agranulocytic angina, but it seems to me that the absolute number of polymorphonuclear leukocytes is rather high for this condition. I therefore offer as differential diagnosis (1) leukemia (2) miliary tuberculosis (3) agranulocytic angina.

Dr. Soma Weiss: I believe that typhoid fever can be ruled out. Although tuberculosis should be considered, I feel reasonably sure, for reasons enumerated above, that this, too, can be ruled out. This case presents an exceedingly rare type of disease, and is seen about once in two years in a large institution like the Boston City Hospital. I believe that diagnosis rests between an aleukemic leukemia, leukanemia and agranulocytic angina. The tremendous increase in the size of the liver is consistent with leukemia, and although no evidence of this disease is present in the blood smear, a section of liver in such cases may show a tremendous infiltration with immature white cells. Ulcerative stomatitis is not an infrequent accompaniment of this disease. The boy is, of course, in a critical condition, and his low white count is alarming. I believe, however, that we have a definite therapeutic agent, as is suggested by Drs. Jackson, Parker and Taylor of the B. C. H., which is of use in stimulating the production of white cell, yeast nucleotide. Therefore, I recommend its immediate use in the following dosage: 5 c.c. intramuscularly for the first injection, 10 c.c. for the second, and 10 c.c. intravenously daily until the white blood picture comes within the normal range.

Clinical differential diagnoses:

- (1) Aleukemic leukemia.
- (2) Leukanemia.
- (3) Agranulocytic angina.

FURTHER COURSE

The administration of the yeast nucleotides was started the following day. The changes in the blood picture were quite striking, as may be observed on the tabular chart.

On July 9th, two days after the administration of the nucleotide, the patient is much more alert. For the first time since admission the temperature remains below 101. The pulse, however, is rapid and feeble, and very little change is observed in respiration rate. The patient has complained the first time of abdominal pain during the third injection. On the following day patient is markedly improved clinically, the ulceration in mouth healing rapidly, the abdomen softer and the liver slightly smaller.

On July 15th, patient has been improving steadily, temperature is now normal for two days. On examination, both spleen and liver are diminished in size. Reflexes are hyperactive; clonus is easily obtained in both legs and right arm, together with a bilateral Babinsky.

July 20th—Patient continues to improve; is now sitting up; the liver is only four fingers below the costal margin and the spleen barely palpable. The temperature has now been normal for eight days.

On July 25th the patient is discharged with normal white count, normal temperature, pulse and respiration rate, with liver and spleen no longer palpable and the ulceration of mouth much improved. The macular patches and the edema about the face and eyelids have almost entirely receded. The mouth still shows the badly ulcerated area in left lower mandible and gums. A week later, patient was admitted to a Boston hospital, where a sequestrum was removed from the jaw.

FOLLOW-UP

The patient presented himself for examination on various occasions up to the present (January 1, 1932). Both X-ray and local examination of jaw shows no sequestrum present and there is complete healing and new bone formation. Oedema of soft tissues has progressively cleared up. Blood morphology, general symptomatology and physical examinations remained normal. Patient is apparently well.

Final diagnosis: Agranulocytic angina.

State Department of Health

The Activities of the Division of Dental Hygiene

By DOROTHY BRYANT, D. H., Director

During the past few years it has come to be realized that many diseases and ailments of childhood and adult life have their origin in the mouth, or gain their entrance to the body through the oral cavity. Mouth health and dental hygiene have become an accepted part of all progressive health department programs.

Maine was the seventh state in the Union to create a Division of Dental Hygiene in its State Department of Health. Since the Division's active commencement, in 1924, it has adhered to its primary objective, a healthy mouth for every person in Maine.

Science has proved to the dental profession that healthy and adequate mouths require years for their production. Consequently the majority of dental health activities deal with the younger generation, either directly or indirectly through their parents and teachers.

Our activities are of two types, executive and educational. While we expect to reach our desired goal ultimately through what may be called an educational program, yet to do all of the educating ourselves would scarcely be feasible. Thus our executive activities, while seeming not to occupy much time or to accomplish a great deal, are of vital importance to the general dental health education program now in progress throughout the state.

To briefly state what the Division of Dental Hygiene is doing, we are:

1. Interesting communities to provide dental health education, through dental hygienist service, for all their younger school and pre-school children.
2. Interesting communities to provide reparative—preventive dental care for their indigent children.
3. Promoting more adequate health serv-

ice in institutions, particularly in sanatoria and juvenile reformatories.

4. Mailing circulars and pamphlets on building and caring for teeth to parents of newborn infants.

5. Providing literature and information for pre-natal cases through the public health nurses.

6. Providing literature and information for parents of pre-school children through public health nurses and by making dental examinations at pre-school conferences.

7. Providing ideas and materials for the use of school-teachers and nurses.

8. Interesting teachers to maintain a dental health education program, through lectures and demonstrations at normal schools, teachers' meetings, etc.

9. Interesting adults, particularly parents, through talks at various organizations, such as women's clubs, service clubs, etc., parent-teachers associations, radio broadcasts, news items, and so on.

10. Devoting the remaining time to the careful dental examinations of school children in communities where requested.

For the accommodation of those progressive towns who wish part-time dental hygienist service, we maintain a dental hygienist, whose services are sold for varying periods of time at a nominal price. This type of service is proving exceedingly popular, for it is a particularly effective method of stimulating interest in dental as well as general health.

The above is a mere outline of our general activities. A detailed description would fill volumes.

That mouth health conditions among Maine school children are improving is disclosed by the statistical reports on dental examinations throughout the state. Our records show that of the school children we examined in 1926, only 6% apparently did not have any carious teeth; in 1931, 15% were apparently without carious teeth.

Our creed through which we expect to reach the desired millenium is the following.

"Good teeth depend upon four things:

"1. Proper food.

"2. Thorough mastication.

"3. Daily home care.

"4. Frequent visits to the dentist."

No small part of the apparent improvement in dental conditions in Maine is due to whole-hearted coöperation of the members of the Maine Dental Society, who have contributed so generously from their time and thought to all that the Division of Dental Hygiene has attempted to do.

State Mortality and Morbidity Reports

MORBIDITY REPORTS FOR THE FOUR WEEKS ENDING DECEMBER 26

(For administrative reasons it is not feasible to give figures for calendar months. Figures are given only for those diseases of which ten or more cases were reported, unless the disease is rare.)

Measles,	1,467
Varicella,	152
Scarlatina,	144
Whooping cough,	99
Gonorrhea,	84
Syphilis,	81
Tuberculosis,	63
Diphtheria,	62
Pneumonia,	58
German measles,	25
Mumps,	14
Influenza,	13
Typhoid and paratyphoid,	12
Poliomyelitis,	2

MORTALITY OF REPORTABLE DISEASES IN NOVEMBER

Tuberculosis, all forms,	28
Broncho-pneumonia,	18
Auto fatalities,	16
Influenza,	12
Pneumonia,	12
Measles,	5
Syphilis,	3
Typhoid and paratyphoid,	3
Diphtheria,	2
Poliomyelitis,	1
Scarlet fever,	1
Septic sore throat,	1



Treasurer's Report

The JOURNAL has completed another year on a self-supporting basis without expense to the Association. It has been improved in appearance and there has been a notable increase in voluntary contributions of articles for publication and number of reprints (twenty-one in number).

Our volume for 1931 contains better than thirty pages more type than the foregoing year. With the increased size of the JOURNAL (in number of pages) there has been a corresponding increased cost of publication. It will be noted that the total expenses were \$350.34 greater than in the year ending January 1, 1931. The major part of this increased expense is accounted for by our policy of assuming one-half the cost (up to 500) of reprints furnished members of the Association.

The JOURNAL has felt the effects of the existing universal business depression, but has been able to carry on and increase its revenue from local advertising. Already contracts secured for the new year encourage the belief that with the continued support of the profession, contributing notes, articles, items of interest and good will, we can realize a better and bigger JOURNAL in 1932.

The Auditor's report is submitted with certain statements which may prove of some interest to local readers and business managers of other state journals.

PHILIP WEBB DAVIS, *Treasurer*.

January 2, 1932.

MAINE MEDICAL JOURNAL,
Portland, Me.

Gentlemen:—We respectfully report that we have audited the accounts of your Treasurer for the year ended January 1, 1932, and have found the same complete and correct in all details of record. Annexed hereto are statements of Cash Receipts and Expenditures for the year ended January 1, 1932, which, in our opinion, correctly show the true finances of the MAINE MEDICAL JOURNAL for the year ended on that date.

There are also attached hereto a Statement of Cash Receipts and Expenditures, and a Comparative Statement of Income and Expense for the two years ended January 1, 1932.

Respectfully submitted,

JORDAN & JORDAN, *Accountants and Auditors*.



MAINE MEDICAL JOURNAL

TREASURER'S REPORT OF CASH RECEIPTS AND EXPENDITURES, JANUARY 1, 1931, to
JANUARY 1, 1932

Cash on hand January 1, 1931,	\$ 141.86
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RECEIPTS

Received from C. M. A. B. advertising,	\$1,844.90
Local advertising	1,832.93
Subscriptions and sale of JOURNALS,	52.41
X-ray cuts sold,	17.10
Mailing list sold,	7.00
Postage refunded,	15.58
	\$3,769.92
Total receipts,	\$3,911.78

EXPENDITURES

Paid for Printing,	\$2,554.15
Salary,	1,040.00
Postage, etc.,	99.00
Mailing fee—second-class matter,	30.59
Telephone,	51.40
Supplies,	53.96
Auditing,	11.91
Refund—X-ray cut sold,	2.61
Advertising sold,	12.50
	\$3,856.12
Total expenditures,	\$3,856.12
Cash on hand January 1, 1932,	\$55.66
Due from 1931 advertising (C. M. A. B. and local),	\$225.38
December bills unpaid (printing December JOURNAL),	\$243.68

CASH RECEIPTS AND EXPENDITURES FOR TWO YEARS, JANUARY 1, 1930, TO
JANUARY 1, 1932

RECEIPTS

Cash on hand January 1, 1930,		\$49.90
Received from C. M. A. B. advertising,	\$3,629.90	
Local advertising,	3,428.22	
Subscriptions and sale of JOURNALS,	168.67	
Refunds,	292.60	
Miscellaneous receipts,	24.10	
Total receipts,		\$7,543.49
		\$7,593.39

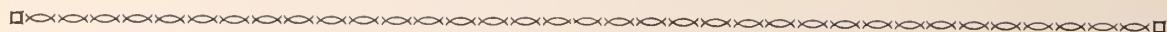
EXPENDITURES

Paid for Printing,	\$4,788.79	
Salary,	2,100.00	
Postage, etc.,	196.00	
Mailing fee—second-class matter,	70.62	
Telephone,	90.55	
Supplies,	178.75	
Refunds,	15.11	
Miscellaneous expenditures,	97.91	
Total expenditures,		\$7,537.73
Cash on hand January 1, 1932,		\$55.66

COMPARATIVE STATEMENT OF INCOME AND EXPENSE

INCOME	One Year Ended Jan. 1, 1932	Increase Decrease	One Year Ended Jan. 1, 1931
C. M. A. B. advertising,	\$1,878.43	\$110.05	\$1,768.38
Local advertising,	1,771.02	240.56	1,530.46
Subscriptions and sale of JOURNALS,	52.41	*63.85	116.26
Miscellaneous income,	21.49	21.49	
Total income,	\$3,723.35	\$308.25	\$3,415.10
EXPENSE	One Year Ended Jan. 1, 1932	Increase Decrease	One Year Ended Jan. 1, 1931
Printing,	\$2,577.13	\$421.03	\$2,156.10
Salary,	1,040.00	*20.00	1,060.00
Postage, etc.,	83.42	*8.27	91.69
Mailing fee—second-class matter,	30.59	*9.44	40.03
Telephone,	47.60	8.70	38.90
Supplies,	53.96	*53.59	107.55
Auditing,	11.91	11.91	
Total expense,	\$3,844.61	\$350.34	\$3,494.27
Excess of expense over income,	*\$121.26	\$42.09	*\$79.17

*Decrease.



Necrology

Leander A. Dascombe, Skowhegan, 1853-1931

Dr. Dascombe, very much beloved as a physician in Skowhegan, died there December 23, 1931, in his seventy-eighth year. He had been failing for several weeks, but looked forward courageously to the end. He was the son of Henry A. and Cynthia Perry Dascombe, born in Wilton, March 28, 1853, receiving his education in the village school and Wilton Academy. After two courses of lectures at the Bowdoin School for Medical Instruction, 1875 and 1876, he was medically graduated at the Bellevue Medical School in New York in 1877.

He settled at once in Kingfield, practicing there two years, then six years in Phillips, removing to Skowhegan in the end of 1886. He practiced there with wonderful success for forty-five years, and until his death last December. Years before, Dr. Dascombe married Miss Ida E. Russell, of Wilton, who survives him.

He was one of the members of the Maine Medical Association decorated with a gold medal in 1931 after fifty years of practice. At the time of his death he was the dean of his profession in Somerset County, and as a citizen was beloved and respected by the entire community.

J. A. S.

Loring Sawyer Lombard, South Portland, 1870-1932

Dr. Lombard, our lamented fellow practitioner from South Portland, died suddenly January 10, 1932.

He was born in West Baldwin, October 1, 1870, the son of James and Nevelia Lombard. After a common and high school education in Bridgton, and study and teaching in the local academy, he was medically educated at Bowdoin Medical School, where he was honored with a degree in 1893. He settled in the winter of 1893 in Greene, where he practiced three years, removing in 1896

to Pleasantdale, South Portland, having previously married, at Greene, Miss Laura E. Thomas, of that town, and is survived by her and a promising son, who walks in his father's profession.

Dr. Lombard practiced the rest of his life in South Portland and was regarded as a man of excellent medical skill, and a favorite with his medical brethren. He always liked to stop and talk with his medical friends on the street, and after speaking for a few minutes in his short, staccato tone, he would hurry off to keep an engagement.

J. A. S.

Books Received

The JOURNAL has received recently the following books:

The Human Voice: Its Care and Development, by Dr. Leon Felderman, a noted Philadelphia otolaryngologist. Published by Henry Holt and Company, New York. The price of the book is \$2.50.

Crippled Children: Their Treatment and Orthopedic Nursing, by Earl D. McBride, B. S., M. D., F. A. C. S. One hundred fifty-nine illustrations. Published by the C. V. Mosby Company, 1931. The price of the book is \$3.50.

Physicians' Manual of Birth Control, by Antoinette F. Konikow, M. D. Published by Buchholz Publishing Company, New York, 1931.

Certified Milk. Proceeding of A. A. M. M. C.—C. M. P. A. A. and M. C. M. P., 1931.

Annual Report of the Surgeon General of the Public Health Service of the United States for the Fiscal Year 1931. United States Government Printing Office, Washington, 1931. The price of the book is 85 cents.

Primer on Fractures. Illustrated. Second Edition, Revised and Re-edited. Prepared by the Co-operative Committee on Fractures, American Medical Association.

New and Non-official Remedies, 1931. American Medical Association.

Human Anatomy, by Harvey. American Medical Association. The price of the book is \$2.00, postpaid.

Health Protection for the Pre-School Child; a publication of the White House Conference on Child Health and Protection. The price of the book is \$2.50.

This report of the White House Conference on Child Health and Protection undertakes to answer the question: To what extent is the health of the children in the United States who are the nucleus of the next generation being protected? The result is the most complete and graphic picture of how preventive medical and dental services are being applied to the pre-school child which has yet been presented. This report was made to the Section on Medical Service of the White House Conference on Child Health and Protection by George Truman Palmer, Dr. P. H., Chairman, Sub-committee on Statistics, Mathew Derryberry, Research Assistant, and Philip Van Ingen, M. D., Chairman, Committee on Medical Care for Children.

County News and Notes

Androscoggin

The Androscoggin County Medical Association met Wednesday, December 23, at 8.00 P. M., at the new auditorium of the Central Maine General Hospital, Lewiston.

After a brief business meeting, the following papers were presented:

1. "Present Day Conceptions of Heart Disease," by Dr. W. J. Renwick.
2. "A Movie Film on Infantile Follow-Up Care—The Story of Georgia Warm Springs."
3. "Preventive Medicine," by Dr. E. V. Call.
4. "Development and Uses of Hystrosalpingography," by Dr. Anthony E. Peters.

J. GOTTLIEB, *Secretary*.

Cumberland

At its annual meeting, on December 18th, the Cumberland County Medical Association elected Dr. Albion H. Little, of Portland, President, and Dr. William Holt, of Portland, was re-elected Secretary and Treasurer.

The Portland Medical Club held a meeting at the Columbia Hotel on Tuesday evening, January 5, at 8.00 o'clock. The essayist was Dr. Eugene O'Donnell; the subject, "Thoracic Surgery."

DR. E. S. HALL,
Secretary.

Dr. John R. Hamel on January 6th read a paper on "Peptic Ulcer" before the Dover Medical Society of Dover, N. H.

Dr. Eugene H. Drake, of 58 Deering Street, has returned after a prolonged trip abroad, having visited many of the important European medical centers.

Knox

At the annual meeting of Knox County Medical Society, December 8, 1931, the following officers were elected:

- President—C. H. Jameson.
Vice-President—F. G. Campbell.
Secretary-Treasurer—F. F. Brown.
Delegate—Wm. A. Ellingwood.
Alternate—J. W. Laughlin.
Censor—J. G. Hutchins.

Dr. Eben Alden, of Thomaston, Me., was elected an honorary member.

F. F. BROWN.

Somerset

Dr. R. C. Brown has moved from Bingham to Skowhegan.

Notices

TREASURY DEPARTMENT, AUGUSTA, ME.
January 9, 1932.

EDITOR,

22 Arsenal Street,
Portland, Me.

Receipt is acknowledged of your letter dated January 8, 1932, in which you request to be advised if travel expenses incident to attendance of medical conventions, scientific meetings, etc., are a proper deduction as an expense from gross income.

In reply, you are informed that it has been held that amounts expended by a physician for railroad fare, hotel accommodations and meals in connection with attending meetings and conventions of various medical associations are deductible as an ordinary and necessary expense.

FRANK J. HAM,
Collector.

To the Editor:

The American Association for the Study of Goiter again offers an award of three hundred dollars (\$300.00) for the best essay based upon original research work on any phase of goiter presented at their annual meeting in Hamilton, Ontario, Canada, June 14th, 15th and 16th, 1932. It is hoped this offer will stimulate valuable research work, especially in regard to the basic cause of goiter.

J. R. YUNG, M. D.,
Corresponding Secretary.

Dr. Howard C. Hanscom, of Damariscotta, retired, has been appointed acting Director of Institutional Service. Dr. Hanscom was born in 1875, graduating in medicine in 1900 from Columbia University College of Physicians and Surgeons, being licensed to practice in New York State in 1910.

In accordance with By-Laws, Chapter XII, a meeting of County Secretaries and the Officers of the State Association will be held at Waterville, Wednesday, February 3rd, Hotel Elmwood, at 5.30 P. M. Let every county be represented.

PHILIP WEBB DAVIS,
Secretary.

Mead's 10 D Cod Liver Oil is made from Newfoundland Oil

Professors Drummond and Hilditch have recently confirmed that for high vitamins A and D potency, Newfoundland cod liver oil is markedly superior to Norwegian, Scottish and Icelandic oils. They have also shown that vitamin A suffers considerable deterioration when stored in white glass bottles.

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Mead's 10 D Cod Liver Oil also enjoys these advantages, plus the additional value of fortification with Mead's Viosterol to a 10 D potency. This ideal agent gives your patients both vitamins A and D without dosage directions to interfere with your personal instructions. For samples, write Mead Johnson & Company, Evansville, Ind., U. S. A., Pioneers in vitamin research.

X-Ray Picture in 1-1000 of a Second

A new Westinghouse three element X-ray tube and machine makes possible the taking of an X-ray snapshot in less than 1/1000th of a second. This enables physicians to see clearly, for positive diagnosis, the inside of a human body, up to this time blurred or hidden in X-rays by the motion of the patient's muscles. This new instrument

was shown for the first time at the Convention of the Radiological Society of North America at St. Louis. This newest aid to science is the invention of Montford Morrison, Westinghouse X-ray Company, and Dr. C. T. Ulrey, of the Westinghouse Lamp Company.

An interesting feature of this new apparatus is that it can be operated from an ordinary house lighting circuit, and in appearance resembles a large-sized radio tube. The method of operation is similar to water collecting behind a dam. When the accumulated electricity behind the dam is sufficient, the dam is opened, which sends the power suddenly, like a bolt of lightning, through the tube and the fast picture is produced.

Correct Putrefaction by Providing the Right Soil

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(lactose 75%—dextrine 25%)

the food that promotes the growth of the normal protective germs.

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Battle Creek, Michigan



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Physicians are invited to visit the institution. Ethical co-operation.

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Wells A. Ruble, M. D.
Medical Director

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THE MAINE EYE AND EAR INFIRMARY ALUMNAE ASSOCIATION calls your attention to its register for graduate nurses, trained in Medical, Surgical, Pediatric, Obstetric, Eye, Ear, Nose and Throat work and registered in the State of Maine.

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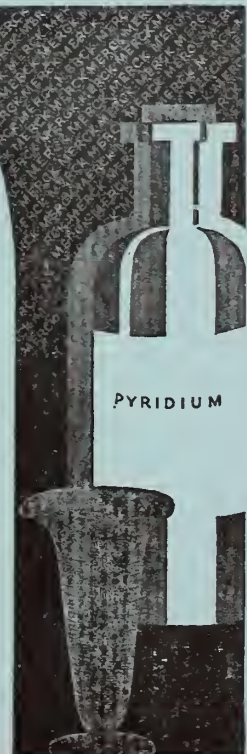
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The Official Organ of

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Vol. XXIII

Portland, Maine, February, 1932

No. 2

Editorial

The Nurse of Yesterday, To-day and To-morrow

A distinguished eastern physician, some thirty years ago, was invited to address a graduating class of nurses at the old Lakeside Hospital in Cleveland, Ohio. He was a hospital man who had devoted much time to the teaching of nurses and well qualified to advise upon matters dealing with the nurse and her training. He had a very high appreciation of the value of a good nurse to the profession and the patient, and paid a glowing tribute to the art of nursing and the thousands of noble women who had labored so devotedly to help suffering humanity in all lands since the days of Florence Nightingale, calling attention to the fact that the nurse of the present had taken over many of the duties and responsibilities of the doctor of earlier days. He prophesied that the nurse of the future would invade more and more the field of labor of the physician, relieving him more and more at the bedside and in the laboratory of the necessity of personally performing many tasks, tests, and examinations, releasing him from much drudgery, and allowing him more time for the study of his

patients and the investigation of problems of health. He spoke with approval of this development and encouraged his listeners to lose no opportunity to perfect themselves, to the end that they might become increasingly valuable to their patients as intelligent *assistants and agents of the physician*. He pointed out that in a sense the nurse of the future would function as does the physician of the present.

He lived to see his prophecy fulfilled. It would be interesting to hear what he would say to the nurse of to-day, who, not satisfied with carrying out the instructions of the physician, acting as his skilled assistant, his other self, seems now actually to be seeking to depose him by elevating her vocation to the dignity of a learned profession. What is to become of the art of nursing when nurses practice medicine?

The JOURNAL is sure that its readers will appreciate the real value of what Dr. Edwin W. Gehring, of Portland, for many years a teacher of nurses at the bedside and in the class room, says with characteristic directness in the following brief comment on the nurse and her education, contrasting what is, and what should be required of her in order to fit her for her vocation.

Nurses or Near Doctors— Which?

To speak with restraint, the curriculum prescribed by the National League of Nursing Education for the training of young women who wish to become nurses is the *ne plus ultra* of absurdity. Those responsible for it have lost sight largely of what the nurse really is. Having no clear idea of her true function, they likewise have no adequate conception of what constitutes education for such a calling. Finally, they fail to appreciate that the preliminary teaching which these young women have had prior to admission to hospital training schools has in no wise fitted them to undertake intensive study of anatomy, physiology, bacteriology, psychology, sociology, materia medica and other subjects even if this were essential, which it is not. From an experience of more than twenty years in trying to teach nurses, I can state positively that these subjects, as taught now according to the Nursing League's prescription, are beyond the comprehension of these young women. They haven't the mental development to cope with them, either as they are now taught by the hospital staff or as they would be taught in the Division of Nurse's Training at the University of Maine.* Hence they flounder about, making the best of a bad matter, memorizing a fact here and there, and ultimately emerge without the ability to make practical application of the stuff and nonsense with which their immature heads have been crammed, and with no knowledge of the art of making a patient comfortable in bed. Such a course is worse than useless in another sense—it isn't necessary. Instead of forty hours of anatomy, enabling the student in parrot fashion to describe the brachial plexus, or the thoracic duct or the temporal bone, all the anatomical knowledge a nurse needs is a little smattering of what may be termed "regional anatomy." She ought to know the approximate locations of the heart, lungs, liver, stomach, spleen, and urinary bladder; more than that is excess baggage for her.

Similarly, it is quite sufficient for her to know that the heart pumps blood to all parts of the body, and the lungs provide for the exchange of carbon dioxide and oxygen; the stomach is a receptacle for and a digester of food with the small intestines; the liver secretes bile, the kidneys excrete urine, which, in turn, accumulates in the urinary bladder until such time as it may be voided conveniently. If she is told what bacteria are and what conditions favor their growth, she will understand, if ever, why it is necessary to maintain surgical cleanliness in the operating room, the confinement chamber, and while doing surgical dressings.

Twenty hours of materia medica for nurses is too ridiculous to contemplate. A knowledge of the actions and purposes of the specifics—five in number—of such pure drugs as the opiates, atropine, digitalis, the bromides and chloral, of such remedies as insulin and liver extract, and of the laxatives from magnesia to salts can be imparted in two hours' time. Ethics is a matter of the golden rule plus a little common sense, whereas psychology, psychiatry and psychoanalysis are as out of place in the nurses' curriculum as would be a consideration of the Einstein theory.

It seems to have been overlooked in planning curricula for nurses that, after all, we are trying to train young women to become *good nurses*, not poor doctors. No wonder that nurses, with all their elaborate, pseudo-scientific training, feel qualified to diagnose and prescribe, which amounts to practicing medicine without a license! No wonder they feel obliged to charge more for their services than those who need them most are able to pay. The prime curse of the whole business is the attempt, on the part of those who would prescribe their training, to *standardize it*, to imitate the tactics of those who, not so long ago, closed many good medical schools.

There are many small and medium-sized hospitals throughout the land in which young girls are taught to become excellent nurses, despite the fact that for them adop-

tion of the super-standard of the Nursing League is not feasible. In many instances, registration by the all-powerful and all-wise nursing board in their own states, and reciprocity with other states, is denied them because of this very fact. Such penalization works a hardship to many deserving girls and hospitals, and is unjust. If a young woman can produce evidence before a board composed of *physicians and nurses* that she possesses the rudiments of the *art of nursing*, she ought, in all fairness, to be allowed to register and pursue her vocation in any state in the Union. To know how to make a bed, to give a hypodermic or an enema, to pass a catheter, to give a bath, to prepare a whole-

some, palatable meal in Maine is to know how to do these same things in California.

We are living in a new era which will effect profound changes in business, politics and education, not the least of which will be the substitution of a curriculum of practical common sense for nurses as opposed to the utterly inane one now in vogue, and should include the election of *physicians* to boards presuming to pass upon the qualifications of those who apply for examination, regardless of where their training may have been obtained. *En avant.*

E. W. G.

February 15, 1931.

*EDITOR'S NOTE—On page 37 will be found an outline of a course for the training of nurses to be instituted this year at the University of Maine.

*Early Diagnosis of Pregnancy

BY MAX DAVIS, M. D.

The physician is very frequently confronted by the problem of determining the presence or absence of a possible pregnancy at a short interval after a presumed conception. The patient does not wish to wait for the absolute proof of the time-honored "positive" signs of pregnancy before being certain of her condition. She may be a very nervous type of individual who does not tolerate prolonged periods of uncertainty well; or, a pregnancy may necessitate a change in her plans for the immediate future. Furthermore, a wide variety of conditions—pulmonary tuberculosis, severe anemias, endocrine disturbances, emotional upsets, the menopause—may all contribute to the confusion of the diagnosis in any particular patient. The differential diagnosis between ectopic gestation and acute salpingitis or appendicitis, between pregnancy and uterine fibroid or ovarian cyst, and between complete and incomplete abortion is a difficulty by which everyone is at times perturbed, and is one which must often be settled

promptly in order to conduct the case safely and satisfactorily. For all these reasons, physicians have sought to develop dependable tests which would give this much-desired information at as early a period as possible after the onset of pregnancy.

Quite naturally, this search for a reliable method has attempted to utilize the various manifestations of pregnancy as the basis for the test, and, as a result, a large variety of tests have come into existence, which may be grouped as metabolic, biologic, or chemical. But the usual outcome of such work has generally followed. The initial enthusiasm with which each method was at first promulgated and urged upon the medical profession has gradually dampened as succeeding investigators have failed to confirm the original reports, and the number of such tests which have fallen and are falling into desuetude is becoming legion. We shall therefore refrain from discussing all but two tests, which we have personally found to be accurate—the ninhydrin flocculation test

*From the Robinson Memorial, the Obstetrical Department of the Massachusetts Memorial Hospitals.

and the Aschheim-Zondek test with its modifications.

Our personal experience with the *ninhydrin flocculation test* consists of over 1,200 cases, in which it has shown an accuracy of approximately 96% in the non-pregnant patients and of 93% in the pregnant cases. Patients with pelvic inflammatory or neoplastic conditions, however, give correct results in only about 80% of the cases, thus taking away a great deal of the value of a positive test in the differential diagnosis of such conditions from pregnancy. The technique of the test is as follows:¹

Two reagents are necessary for the test:

(1) A solution consisting of 2.5 grams of potassium bicarbonate, 55 c. c. of lime water, and 954 c. c. of distilled water. This fluid keeps indefinitely, and before using it must be saturated with carbon dioxide, which is blown through the solution from a tank of the gas.

(2) A solution of 1% ninhydrin (triketo-hydrindene hydrate). This solution must be prepared fresh each time.

10 c. c. of the first solution, 0.2 c. c. of the second reagent, 1.75 to 2 c. c. of blood serum are mixed together, and mixture is then placed in a boiling water bath for three minutes.

The solution turns purplish in both the pregnant and the non-pregnant cases, but the pregnant cases will show a solution containing very fine flocculi in emulsion, whereas the negative cases will have a precipitate consisting of large, coarse flocculi which settled very quickly to the bottom of the tube.

Sources of error in this test are the introduction of red blood cells into the serum used in the test, the use of hemolyzed blood, the use of too much ninhydrin or too little serum, and the use of serum over forty-eight hours old.

This test becomes positive within the first ten days after the missed period. Its chief advantages are the simplicity of its technique and the rapidity with which a report can be given to the patient. The

advantage of speed, however, has been lost somewhat since the development of a modification of the Aschheim-Zondek test, which enables a report to be given in about thirty hours. As a result of this work, we are now using this modification, to be described below, as a routine test, and only occasionally make use of the ninhydrin test in selected cases where speed is of extra importance or where a further check on the case is desired.

"It had long been known that there was an interrelationship between the pituitary gland and the genital organs, but it is only within the last few years that some understanding of this relationship has been gained. By the transplanting of anterior pituitary glands into sexually immature female animals or into older animals from which the anterior pituitary had been removed, Smith² and Engle³ were able to produce sexual maturity, that is, ovulation and corpora lutea formation with consequent estrus. Zondek and Aschheim⁴ arrived at the same results, and they concluded that 'The anterior lobe hormone is the primary, and the ovarian hormone is the secondary. The anterior lobe hormone brings the follicular apparatus into action, fires off the follicular reopening, and mobilizes the secondary ovarian hormone in the follicular cells. This then acts in a specific way on the uterus and vagina.' It had also long been known that the pituitary gland increases in size and weight during pregnancy, the change being restricted to the anterior lobe.⁵ Zondek showed that the blood of pregnant animals contained large quantities of this hormone of the anterior pituitary, and later Aschheim and Zondek^{6,7} reported that large amounts were found in the urine of pregnant women. It had also been determined that there were two hormones secreted by the anterior lobe of the pituitary gland which were active in their influence upon the ovary. The first one, called Prolan A or Rho I, causes maturation of the follicles in the ovary, whereas the second, known as Prolan B or Rho II, brings about luteiniza-

tion of the ruptured follicles and the formation of corpora lutea. Upon these findings, Aschheim and Zondek based their test for pregnancy."⁸

The original technique demands the use of infantile white mice eighteen to twenty-four days old, and weighing from 6 to 8 grams. Five mice are required for each test, in order to permit of control and to take cognizance of the fact that not all mice react equally well to the test, that some of the mice might die during the period of the test. As the hormone is most concentrated in the night urine, the first urine passed in the morning is used as the test specimen. This is filtered and injected in doses of 0.3 c. c. into each mouse. Each mouse receives six injections over a period of forty-eight hours. One hundred hours from the time of the first injection, the mice are autopsied and the ovaries examined.

Aschheim and Zondek divided the reactions obtained into three types. The *first reaction* shows maturation of the ovarian follicles and the appearance of estrus. The follicles increase in size and become filled with follicular fluid, incidentally causing marked enlargement of the ovary. The ovarian hormone is produced by the ripening follicles, which, in turn, bring on estrus, manifested by an enlargement of the uterus and the typical changes in the vagina. The *second reaction* is shown by the presence of petechiæ in the ovary. These are characteristic hemorrhages into the follicles, appearing macroscopically as either brown or bluish-red spots, each the size of the head of a pin and projecting above the surface of the ovary. The *third reaction* is shown by the presence of corpora lutea in the ovaries. Only the presence of reactions two or three, either separately or together, is considered positive for pregnancy, whereas reaction one alone merely indicates the presence of Prolan A and the estrus hormone.

The general accuracy of this test has come to be accepted by practically everyone,⁹ and our own experience with 143 cases, done according to the original technique, gave an

accuracy of 95.7% in the positive cases, and 100% in the negative cases. It can thus be seen that this reaction is of very great value in the diagnosis of pregnancy. But the original Aschheim-Zondek technique has certain distinct objections, despite its great delicacy and its high degree of accuracy. These difficulties consist in the necessity of constantly breeding mice in order to have mice of the proper age for the test always on hand, in the large number of injections needed—thirty for the five mice, in the time interval of one hundred hours, and in the smallness of the ovaries, which sometimes necessitates the use of microscopic sections to verify the macroscopic findings. Various authors have attacked these difficulties in different ways. Mathieu and McKenzie¹⁰ partially eliminated the breeding difficulties and decreased the total number of injections by using one immature rat, but they did not reduce the time interval of the test. Eberson^{11 12} reduced the time interval to from thirty-six to forty-eight hours by concentrating the hormone in the urine, but this method has the objection of introducing the technique of concentration, which, in itself, demands time. The accuracy of the test itself, however, remained high.

Friedman introduced a modification, which, in our experience, eliminates all the difficulties enumerated above, and maintains the accuracy of the original technique. His method "rests upon three fundamental facts: (1) The ovaries of an isolated, unmated female rabbit contain neither corpora lutea nor corpora hemorrhagica, inasmuch as the rabbit does not ovulate spontaneously, but only after coitus. (2) The urine of pregnant women contains some substance or substances which simulate in their biologic effects the anterior lobe of the pituitary. (3) The ovary of the rabbit responds to the injection of these substances by the formation of corpora lutea or corpora hemorrhagica."¹³

The rabbits to be used should be at least ten to twelve weeks old, and should have been isolated from males and from other

female rabbits¹⁴ for at least one week, and preferably for two or three weeks. Ten to twelve cubic centimeters of the first urine voided in the morning are injected intravenously into the marginal ear vein of the rabbit, not employing any sterile precautions for the injection.¹⁵ If an ectopic pregnancy is suspected, the rabbit can be reinjected within ten to twelve hours with ten cubic centimeters more of urine, and then operated upon within twenty-four hours. If there is no need for such urgency, we generally wait for thirty-six to forty-eight hours, and then operate upon the rabbit.¹⁶ The animals are not sacrificed at each test. We only operate upon them under anesthesia, examine the ovaries, and then close the abdomen with silk sutures. Those animals that are negative can be used again at once. Those that are positive are isolated for from twelve to fourteen days, and are then utilized again. In this manner, the negative animals are generally used for three or four tests. However, rabbits that are positive on two occasions are never used again, because the ovaries become so scarred that it becomes difficult for new follicles to mature and rupture, and thus false negatives might result. Since the ovaries of the rabbit are quite large, the reactions are very prominent and microscopic sections are unnecessary.

In our series of 208 cases we have had twelve toxic urines. Eight of the animals developed convulsions immediately after the injections, and died within two to three minutes. The four others recovered after artificial respiration was used.

The Friedman modification is quite as delicate as the original Aschheim-Zondek test. According to Schneider, "The data obtained in these cases indicates that the reaction appears approximately eighteen to twenty-one days following the intercourse responsible for the pregnancy. If these observations are proved to be correct by subsequent investigation, they will serve as additional evidence to substantiate the theory that the hormone causing the reaction may be dependent on the development of

the decidual tissue instead of entirely on anterior pituitary product, as was at first maintained. Further evidence supporting this contention is derived from the fact that the only conditions other than pregnancy causing the reaction are hydatidiform mole and chorio-epithelioma."¹⁷

About 450 cases tested by this method have been reported in the literature, and the accuracy has generally averaged about 98%. Our own series of cases consists of tests performed upon two hundred patients. Practically all of these patients have been followed, and in all of them the correctness of the diagnosis has been confirmed, except as indicated in the tables below.

TABLE I
DISTRIBUTION OF PREGNANT AND NON-PREGNANT CASES ACCORDING TO THE RESULTS OBTAINED.

	Pos.	Neg.	Per Cent. Correct
100 pregnant cases,	98	2	98
100 non-pregnant cases,	4	96	96
Total (200),	102	98	97

TABLE II
DISTRIBUTION OF PREGNANT CASES ACCORDING TO THE DURATION OF THE PREGNANCY

Duration of Pregnancy	No. Cases
2 to 4 weeks,	4
4 to 6 weeks,	52
6 to 8 weeks,	25
2 to 3 months,	6
3 to 4 months,	3
4 to 5 months,	2
5 to 6 months,	5
6 to 7 months,	2
7 to 8 months,	1
Total,	100

The two pregnant cases that gave false negatives were in the group of pregnancies of two to four weeks, that is, the alleged date of intercourse was two to four weeks before the test was performed. One of them proved to be positive on a repeated test.

The second patient was never retested. Four of these cases were ectopic pregnancies, confirmed by operation.

TABLE III

DISTRIBUTION OF NON-PREGNANT CASES
ACCORDING TO SYMPTOMATOLOGY

Type of Cases	No. Cases
Missed one period,	51
Missed two periods,	22
Missed three periods,	5
Missed four periods,	4
Missed five periods,	2
Missed six periods,	2
Missed seven periods,	1
Menstruation irregular,	1
Metrorrhagia with fibroid,	2
Ovarian cyst,	1
After miscarriage,	3
Lactation amenorrhea,	6
Total,	100

Four of these cases gave false positive results, of which two were performed on uncontrolled rabbits, the animals being used on the same morning on which they were brought into the laboratory. The third rabbit was apparently "hopped" by another female. For the fourth inaccuracy there is no explanation.

The following case histories will illustrate some of the problems which were elucidated by the use of this test.

A nullipara, aged 19, had always had regular periods. Her last period was on February 10, 1931. She had had intercourse on February 28, 1931. She missed the period due in March. A test performed on March 16 was negative. The patient had a normal period on April 8.

A multipara, aged 25, had her last period on May 15, 1931. Her last child had been born in September, 1930, and her periods had been regular since their resumption in February, 1931. She had a slight amount of nausea, and some urinary frequency. Vaginal examination gave no information of value. A test performed on June 27 was

negative. The patient had a normal period on July 15.

A multipara, aged 43, had her last period on July 18, 1931. She had had an operation for exophthalmic goitre three years before. Her periods have always been regular. She was very nervous about the possibility of a pregnancy, and felt certain that she was pregnant. A test performed on September 26 was negative. The patient menstruated on October 12.

A tertipara, aged 50, had her last period on December 10, 1930. Her youngest child is 20. During the last year, her periods have been somewhat irregular. She has had occasional headaches and some nausea. She had had intercourse on February 23, 1931, and was greatly afraid of a pregnancy. A test on April 7 was negative. The patient reported that she menstruated on April 23.

A nullipara, aged 25, had her last period on July 19, 1931. She missed her expected period on August 18, but began to stain slightly on August 28. Vaginal examination was essentially negative except for slight tenderness in the right vault. A test on August 21 was positive. The next day the patient began to have some pain in the right lower quadrant, and was sent into the hospital at once with a diagnosis of ectopic pregnancy. Operation confirmed the diagnosis.

A multipara, aged 25, has one child, aged five months, which she is nursing. She has not menstruated since delivery. A test on October 15 was negative. A repeated test on November 12 was also negative. The patient menstruated on December 6, 1931.

A multipara, aged 28, has one child, aged three months, which she is nursing. She has not menstruated since delivery. She began to have some nausea about one week ago. A test on September 12 was positive. The patient miscarried a four months' fetus on December 8, 1931.

A primipara, aged 31, whose last period was on January 17. On April 7, the patient began to flow and stained two napkins. She

was put to bed and given morphine and sodium amytal. The flowing stopped shortly thereafter, and there was no flow until April 9. At 4.00 P. M. on that day she suddenly began to have cramps in the lower abdomen, which continued to increase in severity. She began to flow again at 5.00 P. M., and at 7.00 P. M., she passed practically the complete ovum. Examination of the uterus with the finger under gas-oxygen anesthesia showed the cavity to be completely empty. Mouse and rabbit tests of the first urine voided on the morning of April 9 were both negative. This would seem to indicate that the ovum had apparently died several days before, and that the miscarriage was the result of this death.

A quadripara, aged 33, whose last period was on September 28, 1930, developed a pre-eclamptic toxemia condition. The fetus had apparently died early in May, since which time she had felt no motion. There had been no enlargement of the uterus over a period of two weeks, and the fetal heart sounds could not be heard on repeated examination. Mouse and rabbit tests on May 12 were both positive. The patient went into labor spontaneously and delivered herself of a dead fetus on May 14. The placenta was in fairly good condition, thus accounting for the positive reaction.

CONCLUSIONS

1. The Friedman modification of the Aschheim-Zondek test seems to be the best pregnancy test available at the present.

2. It can be used as a very reliable procedure in the differential diagnosis of pregnancy from a host of conditions which might otherwise lead to great confusion and uncertainty.

3. Death of the *entire* ovum may be diagnosed, and the presence of active placental

tissue in incomplete abortions, hydatidiform mole, and chorio-epithelioma may be determined.

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Frontier Nurses on Horseback Combat Disease, Poverty, Medieval Ignorance in Isolated Regions of the United States

The novel methods by which a handful of women nurses have in six years brought medical care to a remote rural area, typical of many in the United States, where no doctor could make a living and the people were too ignorant and poor to care for themselves, are described in a study just published by the Committee on the Costs of Medical Care.

The study gives a glimpse of one of America's still-existing frontier regions in the back country of Kentucky, where social and health conditions were all but medieval, and where it costs a dollar a mile to bring a doctor into the wilderness on a visit.

In a part of this district the Frontier Nursing Service maintains its health outposts, whence nurse-midwives ride out on horseback to combat squalor, ignorance and disease. The study, by Anne Winslow, Executive Secretary of the Frontier Nursing Service, tells how these women have succeeded, at moderate cost, in providing midwifery, nursing, surgical, medical, dental, hospital and social services for the region.

The Committee on the Costs of Medical Care brought out Miss Winslow's study of the frontier nurses as one of its "Miscellaneous Contributions," because such activities come within the scope of the committee's five-year investigation, now nearing completion, into the problem of "the delivery of adequate, scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life."

The portion of the frontier on which the Service operates lies in Leslie, Perry, Clay, and Bell Counties, Kentucky. The organization was established through the work of Mrs. Mary Breckenridge, a graduate nurse, who made the first survey in 1924, with a view to determining the health needs of the region and devising a way to meet them. Her visit was followed, in 1925, by a survey in Leslie County by Miss Bertram Ireland

in conjunction with the State Board of Health of Kentucky, to check up on unreported births and deaths.

DOLLAR-A-MILE DOCTORS

At the time, Miss Winslow writes: "There was no physician in Leslie County, and in one contiguous area of three counties surveyed there were 15,000 people without one registered physician. In this area it took the nearest doctor six to twenty hours on horseback to reach a patient. Necessarily, the average fee of one dollar a mile was prohibitive for any but a few families. The average total income per capita was under \$143.00 a year."

Doctors charged one dollar a mile to call due to the unusual conditions, namely, that a single call often meant an overnight trip, none of the towns were on railroads, none of the counties were connected with the outside world by automobile roads, and "The customary mode of travel, and often the only possible one, was on horseback along such roads or trails as existed, through creek beds, and over the ridges of mountains."

TYPHOID, HOOKWORM, TUBERCULOSIS

"Epidemics of typhoid fever, diphtheria and smallpox occurred frequently. Owing to their ignorance of any form of sanitation, the people were riddled with hookworm. There was no ventilation in the cabins; babies and children slept with their parents, and tuberculosis invaded whole families."

The birth rate was almost twice that of Kentucky as a whole, and while the death rate was officially reported as lower, this was probably because many of the natives died in the back country, without medical attendance, and without any record. Unrecorded deaths were estimated to be about 35% of the number recorded. Deaths from preventable diseases constituted more than half of the total.

Native midwives, whose ages averaged

about 60 years, and who were untrained and unqualified for their calling, and self-styled "doctors" practiced among these people.

After Mrs. Breckenridge had visited the region, she decided, writes Miss Winslow, "that the health of mothers and children was the most urgent problem, and that the situation called for trained nurse-midwives, who might combine a program of public health and bedside nursing with midwifery."

The Frontier Nursing Service grew out of this belief. It consists at present of twenty-eight nurses, on duty at nine nursing centers. There is also an eighteen bed hospital, built three years ago.

FRONTIER HEALTH POSTS TEN MILES APART

Two nurses are stationed at each of the centers, and three at the hospital. The centers are houses equipped with living accommodations for the nurses and a clinic for patients.

The nurses at a center divide between them an area of about seventy-eight square miles, and each of these women covers her own district on horseback.

She is equipped with two sets of saddlebags, one with material for general nursing, the other for obstetrical work. On the basis of their midwifery training, the State Health Officer gives the frontier nurses special licenses to care for normal deliveries. A collaborating medical advisory committee drew up a "medical routine," which also authorizes the nurses to give certain treatments and medications pending the arrival of a doctor.

Scattered through neighboring counties are a few doctors who can be called upon whenever necessary, and there is a surgeon in the nearest town, twenty-three miles from the Service's hospital.

GUARANTEE DOCTOR'S FEE

If a doctor is called, he may be an overnight trip distant, and his fee may be as much as \$50.00 for a call. This is far beyond the reach of the purse of practically every family in the district, so the Service underwrites the bill, the patient paying as much as possible.

The hospital of the Frontier Nursing Service has a physician in part-time attendance, who also serves as Health Officer of Leslie County. His salary is paid jointly by the Service and the state, and his office was created largely due to the interest aroused by the work of the frontier nurses.

The Service itself charges \$5.00 for prenatal and post-partum care, including delivery. Besides this, a fee of \$1.00 a year entitles any individual or family to public health nursing service, and bedside care in case of illness, and families unable to pay this much are cared for without charge.

In their last fiscal year, the nurses of the Frontier Service attended 9,736 people in 1,851 families, making 47,827 visits altogether. This included 441 deliveries and "false calls."

The total cost of the Service was \$106,406.49 for the year, averaging \$10.92 per patient actually served, but the entire 9,736 patients were able to pay only \$3,367.43 of this total.

Social Insurance

By DR. EDWARD H. OCHSNER

Most Governments Are Inefficient or Corrupt—Some Are Both

One of the very first questions that naturally arises is: Have any of our governmental agencies so conducted themselves in the past as to make it reasonably safe for

us to entrust so stupendous a function as universal social insurance to any branch or department? I maintain that most of our local as well as state governments are in-

efficient or corrupt, and some are both.

Let anyone who doubts the correctness of this statement spend a little time to look around with a critical eye and observe how most local governments, the various departments of the state in which he lives, and the departments of the federal government are conducted, and I am convinced that he will find more inefficiency than he has ever dreamed could exist. If he does not personally know of corruption and inefficiency in government, let him but scan one single daily newspaper regularly for a month in order to be convinced. And what else can one expect who is at all familiar with politics as it has been played and managed in these United States in the year 1931—the manner in which most men secure their nominations and later their elections, and to whom they are beholden when they take office?

We have all seen the statement repeatedly in the public press, but have never seen it successfully refuted, that in many of the political subdivisions of our country only 60% of the taxes collected are effectively spent, the remainder being frittered away, wasted or stolen. This inefficiency and corruption is due to many causes, of which some of the more important are:

The fact that so far no formula has been discovered according to which the most efficient, honest, industrious and worthy members of the community can be secured for public office. Nor has there been any method devised whereby spoils, politics, favoritism, pull, nepotism, waste and graft can be eliminated with even a reasonable degree of certainty. The individual who could solve these two problems would not only be the greatest benefactor of the human race, but the wisest man the world has so far produced. Plato tried to solve this problem twenty-three centuries ago when he wrote his *Republic*. For a time he actually thought he had found a solution. He prevailed upon the King of Syracuse to adopt his plan and put it into operation. The King tried it for a while, tired of it, and sold

Plato into slavery. Some good friends ransomed him. After that he was not so sure that his scheme would work in practice. Things are not much different to-day than they were in the time of Plato, only worse—worse, because of the increase in population resulting in larger governmental units, the enormous increase in the number of those exercising the franchise, the increase in the percentage number of ignorant voters, and the ever increasing astuteness and finesse of our practical politicians.

Inefficiency and corruption is so common that we have become callous to it. We are annoyed by it, we grumble and complain mildly about it, we pay our ever mounting taxes if we have anything with which to pay, and “let it go at that.” It almost seems as though we humans had adopted David Harum’s dog philosophy and were applying it to ourselves. He said: “A certain amount of fleas is good for a dog. It keeps him from brooding on being a dog.”

The best illustration of governmental muddling in general is to be found in the mess most governments of the world have made of themselves during the past twenty years. As examples, we need but call attention to the virtual bankruptcy of Germany and of Austria, the maladministration in Russia, the revolutions in Spain, China, Central and South America, the dictatorships in Poland and Italy, and when we come nearer home, the general lawlessness in the United States, with its murders and kidnapping for ransom; conditions in the city of New York as disclosed by the Seabury Investigation; the virtual bankruptcy of Chicago and Philadelphia, and the near bankruptcy of many other governmental units.

Let us study conditions in our own country a little more in detail in order to determine whether it would be wise or even safe to entrust the federal, state and local government, or any one of them, with supervision over the private lives of its citizens. (This phase of the problem will be taken up more in detail in the future instalments.)

State Department of Health

The Division of Social Hygiene

By WILLIAM L. HOLT, M. D., C. P. H., Director

The present Director of the Division of Social Hygiene followed Dr. G. H. Coombs in January, 1929. He took his M. D. at Harvard in 1905, and the Certificate in Public Health at the Harvard Technology School for Health Officers in 1914.

The fundamental aim of the Division is to control the venereal diseases in the state so far as the physicians and the public permit.

The chief measures are briefly the following: The first is to ascertain the incidence of syphilis and gonorrhea by reports of new cases from the physicians. It is an axiom in health work that we cannot begin to control any communicable disease unless we know when, where and how many cases are occurring. The venereal diseases were made reportable in 1918, and the next year the largest number of cases was reported of any year, viz., 1,538 gonorrhea and 805 syphilis. Last year 1,034 cases of gonorrhea and 544 of syphilis were reported.

The reporting has improved much, however, in the past three years. Although the actual numbers of new cases have probably not increased since 1928, the reported numbers have gone up since 1928 from 378 for gonorrhea and from 130 for syphilis. In the fiscal year 1930-1931, 273 physicians reported venereal cases. We still get only about a quarter, I estimate, of the actual new cases of syphilis, and a smaller fraction of the cases of gonorrhea.

The measures to prevent new cases of venereal disease are:

(1) To provide nearly free treatment for the large number of indigent venereal persons who cannot afford the long, expensive treatment required. This is done by subsidizing eight special clinics, for which the state pays the medical director a small salary and furnishes the drugs and instruments. These are located as follows: Dr.

H. J. Hunt, 162 French St., Bangor; Dr. L. T. Snipe, Bath Health Center, Bath; Dr. W. N. Miner, Calais Hospital; Dr. H. L. Gauvreau, 82 Pine St., Lewiston; Dr. B. B. Foster, Maine Eye and Ear Infirmary, Portland (syphilis only); Dr. G. A. Pudor, Portland Dispensary; Dr. S. W. Boone, Presque Isle General Hospital, Aroostook County; Dr. B. O. Goodrich, Sister's Hospital, Waterville. These clinics treated the last fiscal year 455 patients for syphilis and 517 for gonorrhea. The syphilitics got on the average 5.5 doses of salvarsan at a total cost to the state of 64 cents each and 10 of bismuth or mercury at 50 cents each, making a total average cost of \$8.52. This is, of course, insufficient treatment, but represents about four months of weekly treatment, which none of these working people could have paid a private physician for.

(2) Besides the clinics, the Division furnished last year to 57 private doctors 1,120 doses of the three arsphenamines, for over 100 poor patients, as well as 68 boxes of mercury and bismuth salts.

The justification of this treatment of disease by a State Bureau of Health is a double one: First, by rendering patients non-infectious promptly it stops their spread of the disease most effectively; second, by assuring early treatment to many indigent cases who would not otherwise get it, it prevents many from becoming helpless invalids from insanity, rheumatism, etc., and so expensive burdens on the state.

(3) The Division tries through the district and local health officers to require all contagious venereal cases to continue treatment until the attending physician considers them at least non-infectious. To this end the State Regulations, revised in September, 1930, require that whenever a venereal patient shall stop treatment with a physician while he is liable to spread his disease, the

physician shall report such delinquent person to the State Bureau of Health, giving the name, etc., unless he is notified within seven days that the patient is being treated by another physician. Please read the regulations, which were sent all physicians in 1931.

(4) The last measure we take for prevention of venereal disease is educational. In the year 1930-1931 my assistant, Miss Margaret Herrick, and the Director gave lectures and showed educational films to the boys and girls in twenty-three high schools.

State Mortality and Morbidity Reports

MORTALITY OF REPORTABLE DISEASES FOR DECEMBER, 1931

(For administrative reasons it is not feasible to give figures for calendar months. Figures are given only for those diseases of which ten or more cases were reported, unless the disease is rare.)

Pneumonia, lobar and plain,	30
Tuberculosis of lungs,	24
Bronchopneumonia,	22
Auto fatalities,	12

Influenza,	11
Tuberculosis, other forms,	6
Measles,	4
Typhoid and paratyphoid,	2
Diphtheria,	2
Cerebrospinal fever,	1
Gonococcus infection,	1
Scarlet fever,	1
Syphilis,	1

MORBIDITY REPORT FOR FIVE WEEKS ENDING JANUARY 30, 1932

Measles,	2,805
Influenza,	710
Chicken pox,	261
Scarlet fever,	171
Pneumonia (all forms),	138
Whooping cough,	130
German measles,	91
Mumps,	60
Tuberculosis (all forms),	55
Diphtheria,	25
Typhoid,	8
Poliomyelitis,	5
Cerebrospinal meningitis,	4

University of Maine, Orono, Maine

Extension Department—Division of Nursing Training

BULLETIN NO. 1

January 8, 1932.

The University of Maine will open for registration in September, 1932, a one-year special course designed to meet the needs of nursing training. This course *will not be given if less than fourteen students register*. The work will be handled at the University through the Extension Service of the College of Arts and Sciences at the usual extension rates, and will cost each student \$153.00 per year as compared with \$150.00 for straight tuition. The curriculum is planned as follows:

First Semester	Credit Hours
Anatomy and Physiology,	4
Chemistry,	4

Bacteriology,	4
English,	3
Personal Hygiene,	1
Physical Training,	0

16

Second Semester	Credit Hours
Anatomy and Physiology,	4
Dietetics,	3
Psychology,	3
English,	3
Sociology,	3
History of Nursing,	1
Physical Training,	0

Credit Hours

17

This course complete will furnish thirty-

three semester hours of University credit. If further work is contemplated leading to a degree in College of Arts and Sciences, certain additional requirements of distribution will have to be met.

The Training School of the Eastern Maine General Hospital has agreed to grant six calendar months' time credit for this curriculum toward their three-year training course and full credit for each subject listed.

In this curriculum provision is made for three groups of students: (a) Those graduates of accredited high schools in the State of Maine who can fulfill the complete requirements for admission to the College of Arts and Sciences. These students will receive full academic credit for the course completed and this credit may be counted toward the requirements for a bachelor's degree. (b) Students presenting entrance credits deficient in the modern language requirement only. Such students may enroll in the special course, but may not be candidates for a degree until their entrance deficiency is removed. They will receive certification for completed work, however, which will provide for advanced standing in the hospital school. (c) A third group may be made of students matriculated in a hospital school and sent by the school to the University for this course, thereby obligating their return to that particular school.

General physical fitness is required for admission to the University and would apply to the extension students. Candidates would be selected as carefully as possible with respect to "fitness for nursing." It is recommended, however, that students matriculate definitely in a nursing training school before applying for the University course, and thereby establish acceptance as candidates for the nursing profession.

Students registered for this special course will, for the period of the academic year, be under the direct jurisdiction of the University of Maine and subject to such regulations as may be established for their best guidance and welfare.

Further details will be presented in sub-

sequent bulletins, and all requests for information should be directed to Professor K. S. Rice, University of Maine, Orono, Maine.

Necrology

Warren Gray Sawyer, 1855-1931, Madison

Warren Gray Sawyer was buried from the village church, the front of it being profusely decorated with flowers, and all of the shops of Madison in which he had lived so long were closed in his honor and respect.

Dr. Sawyer was born in Madison, February 13, 1855, the son of Almon and Fannie Greenleaf Sawyer. He studied in Madison and later moved to Skowhegan, where he studied medicine with the local celebrity, Dr. Morrill, earning his money to do so by logging on the river and working in an oil-cloth factory. He also taught in Moscow and other towns. In 1884 he obtained his medical degree from Bowdoin and went to settle in Starks, Me., where he married Miss Nellie A. Young, in April, 1885. In the following year his wife persuaded him to move to Madison, where he passed the rest of his life as a genuine country doctor.

He was interested in Democratic politics, was a member of the electric light plant of the village for years and the Madison water district. He was town physician and school physician and served in the Maine Legislature in 1916.

Dr. Sawyer's record as a medical examiner is noteworthy, in that he kept the records of 91 deaths, 32 from accidents, 22 from suicide, 22 from natural causes, 22 from murders, and several from causes unknown. After fifteen years of most honorable and exemplary service as medical examiner, he resigned in November, 1931, and died December 26th.

Nor should we forget that during the war he was a member of the Somerset County Examining Board. Thus we see what a fine career Dr. Sawyer has left for a memorial.

J. A. S.

County News and Notes

Androscoggin

The Androscoggin County Medical Society met Friday, February 5th, at 8.00 P. M., at the Marcotte Home, Lewiston, Me.

After a brief business meeting, Dr. Joseph W. Scannell presented a paper on "The Acute Abdomen."

J. GOTTLIEB,
Secretary.

Cumberland

The Cumberland County Medical Society held a meeting at the Eastland, Portland, January 29th. Dr. Milton J. Rosenau addressed the members on "Pasteurization of Milk."

The society unanimously passed the following resolutions, presented by Dr. E. W. Gehring:

WHEREAS, From the standpoint of the sanitarian, milk and meat are our most important animal foods, and

WHEREAS, Milk is our best single food, because it contains all the essentials of a well-balanced diet, is rich in vitamins, and the quality of its protein is excellent; because it is palatable, its fat favors growth and its calcium content is high; because it is readily digestible, is the most economic source of protein, and is a protective food that guards against deficiency diseases in combination with other food-stuffs; and

WHEREAS, It is also an excellent culture medium and the most difficult food to obtain, handle, transport, and deliver in a clean, fresh, satisfactory condition; and

WHEREAS, Milk, as a rule, becomes infected from human sources, resulting in milk-borne epidemics of diphtheria, typhoid, scarlet fever, and septic sore throat, not to mention countless instances of tuberculosis, the diarrheal diseases of children and undulant fever; and

WHEREAS, Pasteurization properly performed is the simplest, cheapest, least objectionable and most trustworthy expedient to date for rendering infected milk safe, and

WHEREAS, We, as physicians, must *insist* upon the supply being *fresh, clean and safe*; therefore be it

Resolved, That the Cumberland County Medical Society, in regular session on January 29, 1932, hereby does endorse unequivocally the proper pasteurization of milk; and be it further

Resolved, That as custodians of the health of those who entrust themselves to our care, it is our plain duty to recommend pasteurization as the best method yet known for rendering milk *safe*.

On February 2nd, Dr. Charles H. Hunt discussed before the Portland Medical Club the subject of "Industrial Accidents and the Status of the Insured, the Insurance Company and the Physician under Our Workman's Compensation Act." We agree with Dr. Hunt that in general the law has effected great benefits to all concerned. He stated that it must be remembered that the insurance companies do not pay—it is the employer who foots the bills. Dr. Hunt's remarks aroused free discussion, and several members expressed their belief that some modification of the present methods might be desirable.

While insurance companies may sometimes be imposed upon, it is our impression that they are well able to protect themselves. The interests of the workman also seem to be well guarded. As to the profession, although the law secures for it annually many thousands of dollars, that certainly could be realized in no other way, it is equally certain that this profit is not equitably distributed, being directed by the insurance companies into the hands of a comparative few, largely older practitioners. This "playing of favorites" by the insurance companies is a natural effort to place the work in the hands of those whom they think will best guard the interests of the company. We should here note that the interests of the insurance company, the employer, and the insured should be identical in so far as a prompt return to health and work is concerned. It would seem, however, that more of our able young men might share in the rewards.

Dr. Hunt expressed the opinion that the insurance companies have little ground for complaint on account of specific overcharging on the part of the doctor, though there is some "padding" of bills, *e. g.*, in the matter of charges for too frequent dressings. It occurs to us that disputed bills and charges might be referred to a small arbitration board appointed by our local County Societies to act with the Commissioner.

Finally, the insured should more often be protected by the calling of impartial medical counsel. This is not practiced by the Commissioner frequently enough.

Knox

A meeting of the Knox County Medical Society was held Tuesday, February 9, 1932, at Thorndike Hotel.

Dr. Popplestone read a paper.

Penobscot

The Penobscot County Medical Society met Tuesday, February 16, 1932, at the Bangor House, at 6.30 P. M.

After dinner and business meeting, Dr. Ernest M. Daland, of Boston, Instructor of Surgery at the Harvard Medical School, spoke on "The Accepted Methods in the Treatment of Cancer."

Kennebec

February 9, 1932.

TO THE EDITOR AND SECRETARY, MAINE MEDICAL ASSOCIATION:

Have just put off writing you, but I wish to let you know that I liked your editorial on Birth Control in the December number.

I am a believer in birth control, as we now understand it, and have followed the movement and clinic in New York City for some years.

Your comments on Maine records in the *Bulletin of the A. M. A.*, of January, 1932, also attracted my attention. These were things that I did approve of. You know that I do not always agree with you. According to Dr. Tyson I must be a Negativist.

There is a matter that has had my interest for a long while, and last June, if I recall correctly, the State Association was interesting itself in the matter of nurses. I believe that we should take some action to abolish the charge to patients of board bills the hospitals make in addition to private nursing charge. In the hue and cry of the high cost of medical care I feel that here is a legitimate complaint. When a patient pays \$6.00 or more per day for a private nurse it is unjust that an extra \$10.00 or more be added to the patient's bill for that nurse's board per week, and if there is an additional night nurse, the additional charge of \$20.00 for her board is often a serious factor in financing that illness. Anyone earning that amount of money should board himself. I know of no other group that gets this additional fee. I feel that nurses should board themselves for the fee they now receive from patients. What is your opinion, Doctor, on this point?

Right now there seems to be some competition in the various hospitals hereabouts in the matter of running clinics, and I fear that as a result our county society meetings will suffer, for we are getting "fed up" on a multitude of such things. I believe that our county society should be the group holding these instructing clinics, as the greatest number of men are thus reached. There should be clear thinking as to what is the best thing for the men in the county as a whole. I, personally, am "fed up" on clinics, what with my hospital staff requirements, my county society meetings, and the visits I make to New York and other big centers. There is such a thing as too much being detrimental.

I have done my best to give you my views. You will probably hear more of them if you continue to visit our county meetings.

Yours in the best sincerity,

SAMUEL H. KAGAN, M. D.

Augusta, Me.

February 11, 1932.

The Editor thanks Dr. Kagan for his note of February 9th. It is always pleasing to know that the JOURNAL is read, and of course a satisfaction to find that there are those who agree with one on some points.

We are interested in what is said as to nurses and their charges, and certainly agree that there should be some steps taken to do away with or modify the additional charge for hospital nurses' board.

We also are in agreement with the doctor as to the present emphasis on and multiplicity of clinics, but though you and I may personally be "fed up" on clinics, we should go slowly in discouraging them, for good clinics are of real value to many, and, as you say, the *summum bonum* should be our object.

EDITOR.

Notices

The Selectmen of Tenant's Harbor report the town of St. George is without a doctor. The population is between two and three thousand. For further particulars write to M. J. Harris, Tenant's Harbor, Me. St. George is located about twelve miles from Rockland, a city of 10,000+ inhabitants, and has very good hospital facilities.

TO THE EDITOR:

The next written examination of the American Board of Obstetrics and Gynecology will be held in nineteen different cities of the United States and Canada, at 2.00 P. M., on Saturday, March 26, 1932. The general, oral and clinical examinations will be held in New Orleans on Tuesday, May 10, 1932, immediately preceding the meeting of the American Medical Association. Reduced railroad fares will be available. For detailed information and application blanks apply to the Secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh, Penn.

New England Heart Association continues its series of monthly discussions at the Boston Medical Library, Wednesdays, at 4.30 P. M. The program for the March and April meetings is as follows:

MARCH 2, 1932

- V. Effect on the Heart of Diphtheria, Scarlet Fever and Tuberculosis.
 1. Pathology, speaker unassigned.
 2. Clinical Aspects of the Heart in Diphtheria and Scarlet Fever, Dr. Edwin Place.
 3. Tuberculosis and the Heart, Dr. John B. Hawes, 2nd.
 4. Discussion, Dr. Conrad Wesselhøft.

APRIL 6, 1932.

- VI. Cardiovascular Syphilis.
 1. Pathology, Dr. Tracy Mallory.
 2. Diagnosis, speaker unassigned.
 3. Treatment, speaker unassigned.
 4. Discussion, Dr. Samuel A. Levine.

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Medical Director

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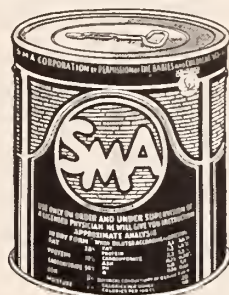
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	Grams	Pro.	Fat	CHO	Cal.
1 tablespoonful Knox Sparkling Gelatine....	7.	6.			
¼ cup cold water.....					
1 cup milk.....	240.	7.5	10.	12.	....
¾ cup water.....	....	....	....	....	....
2 eggs.....	100.	13.	10.5	....	....
1½ teaspoonfuls vanilla.....	....	....	....	....	....
1 tablespoonful sugar....	8.	....	....	8.	....
	....	26.5	20.5	20.	370.5

Soak gelatine in cold water. Heat ¾ cup water and milk—add gelatine and stir until dissolved. Separate eggs and beat yolks to lemon color. Pour hot gelatine mixture slowly into egg yolks, cook over hot water until mixture begins to thicken, stirring constantly. Remove from stove, add salt, and flavoring. Cool. When nearly set fold in whites of eggs which have been beaten stiff. Mold and chill.

LEMON DESSERT

(6 Servings)

	Grams	Pro.	Fat	CHO	Cal.
1½ tablespoonfuls Knox Sparkling Gelatine....	10.	9.	....	....	....
¼ cup cold water.....	....	....	....	....	....
2¼ cups hot water.....	....	....	....	....	....
Grated rind 1 lemon.....	....	....	....	....	....
4 tablespoonfuls lemon juice.....	40.	....	....	4.	....
2 tablespoonfuls sugar....	16.	....	....	16.	....
	....	9.	....	20.	116

Soak gelatine in cold water. Add lemon rind to water while heating to boil. Pour over the soaked gelatine to dissolve it. Add lemon juice and sugar; stir until sugar is dissolved. Strain into molds and chill.

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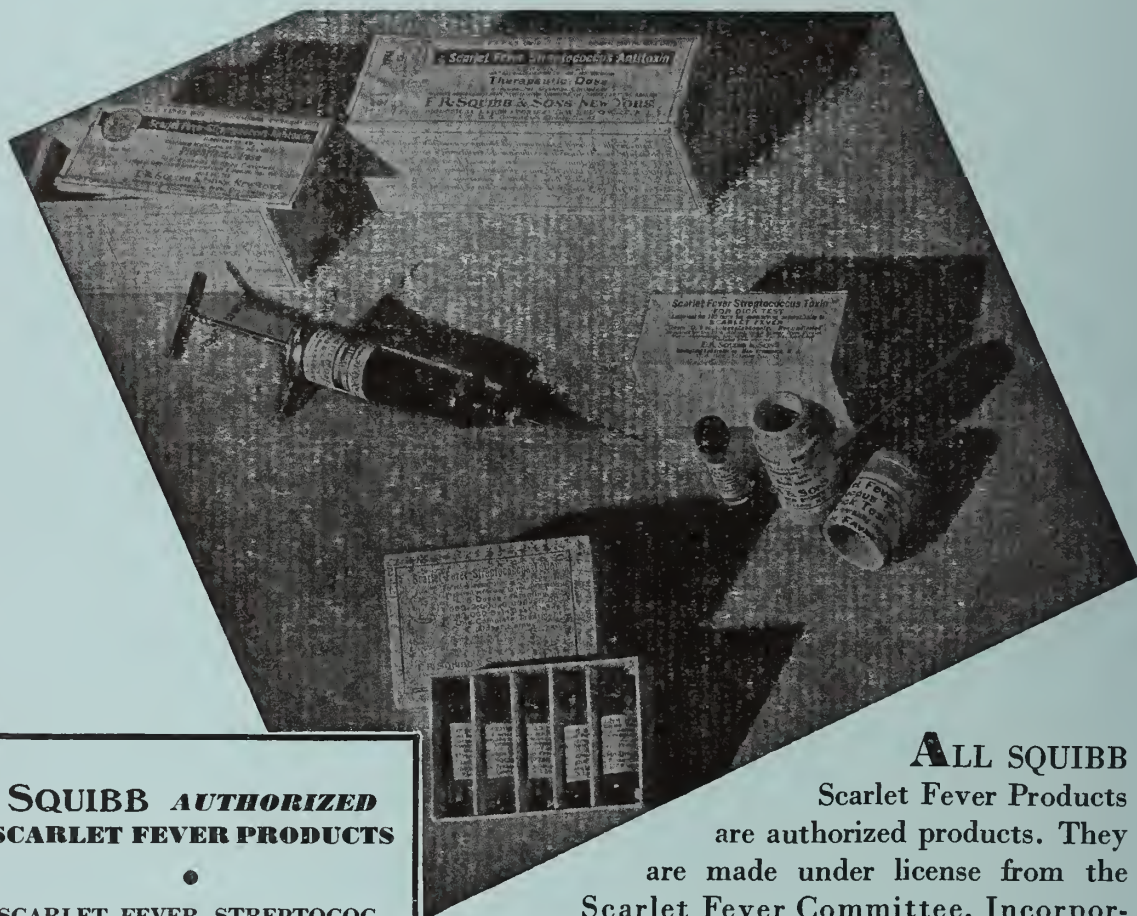
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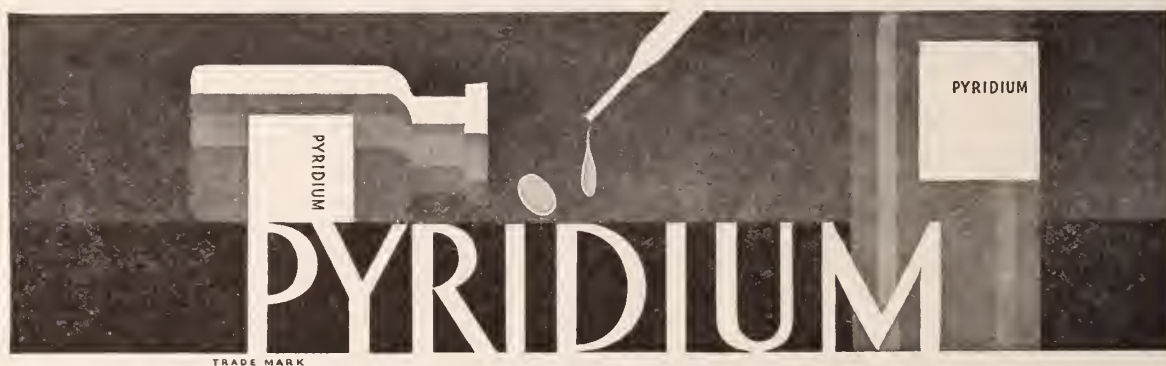
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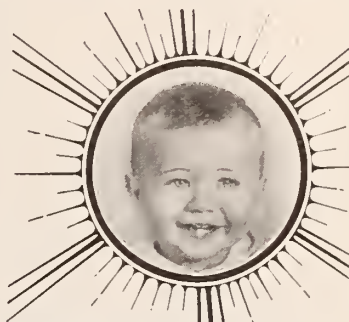
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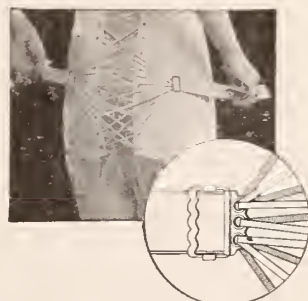
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The Official Organ of

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Vol. XXIII

Portland, Maine, March, 1932

No. 3

Editorial

The Eightieth Annual Meeting

The next meeting of the Maine Medical Association, at Rangeley Lakes, June 16th, 17th and 18th, promises to be one of the best, if not the best ever held in the state. Plans have been perfected for a program which should be of interest and value to every member. As was previously announced, the two morning sessions on Thursday and Friday will be devoted to a series of Group Conferences, covering a variety of subjects. The two afternoon sessions and the closing session Saturday morning will be devoted to scientific papers. These have been carefully selected and should appeal to all. The complete program will be given out in the next issue of the JOURNAL.

As was announced in the January number, Dr. Elliott Cutler, at present Director of Surgery at Lakeside Hospital, Cleveland, and who is to take Dr. Harvey Cushing's place at the Peter Bent Brigham Hospital, and as Professor of Surgery at Harvard Medical School, will be one of the guest speakers.

The Program Committee takes great pleasure in announcing that Dr. John A. Kolmer, Professor of Pathology and Bacteriology, Graduate School of Medicine, and Direc-

tor of the Laboratories, University of Pennsylvania, will be another guest speaker. Dr. Kolmer will speak on "Meningitis," upon which subject he has done a tremendous amount of original work. It is felt that his efforts in this line furnish the most hopeful light on this difficult problem of medicine. It will be a rare privilege to have a man of Dr. Kolmer's attainments as a guest of the Association.

The Group Conferences will be a very important part of the meeting. These Conferences will be limited to fifteen men each, and they will be given in four series, about twelve running simultaneously. A list of the Conferences, with the leader of each, is given below. Members are requested to apply for the Conferences they desire to attend. Each man may attend four Conferences. One group will be given Thursday at 9.00 A. M.; the second group on Thursday at 10.30 A. M.; the third group Friday at 9.00 A. M., and the last group Friday at 10.30 A. M. In order that the committee may so arrange these Conferences to accommodate the wishes of the greatest number, members of the Association are requested to fill out the coupon attached below, stating their preferences as to Con-

ferences, and mail the same to Dr. F. T. Hill, Waterville, Me., as early as possible. In this way the committee will try to arrange the time of each Conference so that the members may have their choice of those they wish to attend. As it will in all probability be impossible to give every person just the Conference they wish, they are requested to express their second choice. It

will be a case of "First come, first served," consequently those applying first will be assigned the Conferences they wish. Early attention to this matter is requested, in order to facilitate the work of the committee.

The final list of Conferences, with time of each, will be given in a later number of the JOURNAL, after the returns from the applications have been considered.

CONFERENCES

- | | |
|--|-----------------------------------|
| 1. X-ray. "Bones and Gastrointestinal Tract," | Drs. F. W. Lamb and L. F. Thaxter |
| 2. X-ray. "Chests," | Dr. John P. Goodrich |
| 3. Pathology. "Spleen and Its Relation to the Blood," | Dr. Mortimer Warren |
| 4. Pathology. "Tumors—Their Classification and Gradation," | Dr. Julius Gottlieb |
| 5. "Military Surgery," | Dr. John G. Towne |
| 6. "Surgery of the Hand," | Dr. E. M. McCarthy |
| 7. "Malignancy of the Large Intestines," | Dr. W. E. Webber |
| 8. "Atelectasis," | Dr. C. W. Bell |
| 9. "History and Present Status of Cleft Palate and Harelip Surgery," | Dr. Owen Smith |
| 10. "Thoracic Surgery," | Dr. G. E. Young |
| 11. "Deep Pus in the Neck—Surgical Approach," | Dr. F. T. Hill |
| 12. "Surgical Conditions of the Gall Bladder," | Dr. J. W. Scannell |
| 13. Sanitation. "Water Supplies and Sewage Disposal and Their Relation to Health," | Dr. E. W. Campbell |
| 14. "Allergy—General Considerations—Etiology," | Dr. C. B. Sylvester |
| 15. Syphilis. "Lues—Control in Sparsely Settled Communities," | Dr. B. B. Foster |
| 16. Physiotherapy. "Present-Day Methods of Physiotherapy," | Dr. F. L. Fallon |
| 17. Immunology. "Immunization of Smallpox, Diphtheria and Scarlet Fever," | Dr. W. L. Holt |
| 18. "Constipation," | Dr. T. J. Burrage |
| 19. "Nephritis," | Dr. H. S. Emery |
| 20. "Diabetes," | Dr. J. O. Piper |
| 21. "Pneumonia," | Dr. B. L. Bryant |
| 22. "Tuberculosis," | Dr. Lester Adams |
| 23. "Treatment of Heart Disease," | Dr. W. J. Renwick |
| 24. Electrocardiology. "Clinical and Electrocardiographic Studies of the Cardiac Arrhythmias," | Dr. E. H. Drake |
| 25. Pediatrics. "General Consideration of Infant Feeding," | Dr. T. A. Foster |
| 26. "Intestinal Obstruction," | Dr. C. M. Robinson |
| 27. "Cerebrocranial Injuries," | Dr. E. H. Risley |
| 28. "Acute and Chronic Symptomatology and Treatment," | Dr. W. N. Miner |
| 29. "Bedside Diagnosis of Intraabdominal Pathology," | Dr. N. A. Fogg |
| 30. "Renal Pain—Etiology and Diagnosis," | Dr. C. H. Jameson |



31. "Fractures in General Practice,"

Dr. Allan Woodcock
32. "A Consideration of the Correction of Faulty Foot Conditions by Operative and Non-operative Methods,"

Dr. R. O. Meisenback
33. Gynæcology. "Extra-uterine Pregnancy,"

Dr. R. L. Reynolds
34. Gynæcology. "Radium and Surgery for Malignancy in the Female,"

Dr. A. P. Leighton
35. Obstetrics. "Hemorrhage—Pregnancy, Labor and Puerperium,"

Dr. A. H. McQuillan
36. Obstetrics. "Use and Abuse of Forceps,"

Dr. R. B. Moore
37. Cancer and Radiation. "Clinical Diagnosis and Treatment of Cancer,"

Dr. Barbara Hunt
38. Ophthalmology. "Ocular Disorders in General Practice,"

Dr. S. J. Beach
39. Ophthalmology. "External Ocular Diseases,"

Dr. E. E. Holt, Jr.
40. "Psychiatry in Maine,"

Dr. S. E. Vosburgh
41. "Mental Disease. Differation between Organic and Functional Disorders,"

Dr. F. C. Tyson
42. "Tracheotomy and Intubation,"

Dr. G. O. Cummings
43. "The Management of Acute Otitis Media,"

Dr. H. P. Johnson
44. "The Maxillary Sinus,"

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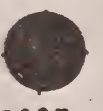
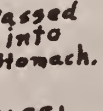
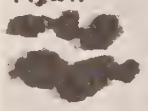
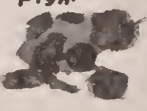
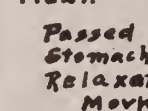
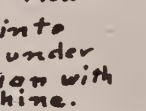
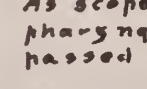
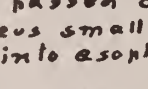
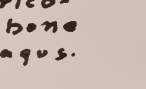
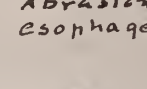
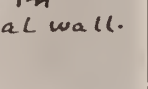
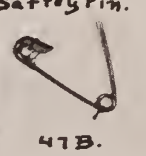
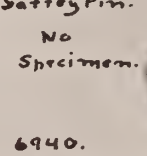
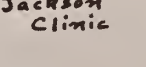
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(Signature)

Fill out and mail to Dr. F. T. Hill, Chairman of the Program Committee.

Foreign Bodies in the Food and Air Passages

By GEORGE O. CUMMINGS, M. D., Portland, Me.

Nickel.  10322.	Penny.  STH.	Penny.  13237.	Penny.  16261.	Penny. Passed into Stomach.  M&E1.	Button.  15778.	Button. Parents signed Release. 9509.
Meat.  12236.	Meat.  15389.	Fish.  16067.	Meat. Passed into Stomach under Relaxation with Morphine.  18706.	Meat.  16808.	Chicken. About Six Ounces. No Specimen. 21838.	
Fish Bone.  8766.	Fish Bone.  20497.	Fish Bone. As scope passed crico- pharyngeus small bone passed into esophagus.  17526.	Fish Bone.  17919.	Fish Bone.  19145.	Fish Bone. Abrasion in Esophageal wall.  8915	Fish Bone.  8917.
Chicken Bone.  14106.	Pork Bone.  14370.	Pork Bone.  22102.	Safety Pin.  47A.	Safety Pin.  47B.	Safety Pin. No Specimen.  6940.	Clam Shell. Part of Clam.  14108.
Plum Stone.  16662.	Brooch Pin.  17499.	Orange Seed. Collar Button.  20470.	Safety Pin.  23439.	Safety Pin. Sent to Jackson Clinic  M&E2.	Egg Shell.  16869.	Peanut? Parents Signed Release. 12915.
		Peanut.  23184.	Peanut.  23400			

Foreign bodies removed from food and air passages.

When we see a patient who is believed to have a foreign body in the food or air passage, our first endeavor should be to ascertain the type of object. Fish bones, the most common offenders, are usually found about the pharynx. Flat objects of fair size, such as coins, buttons, etc., generally lodge in the esophagus at the entrance to the thorax. Smaller slender bodies, such as pins, peanut kernels, etc., are more frequently found in the tracheobronchial tree. Seventy per cent. of foreign bodies occurring in the food or air passages of adults occur in those wearing false teeth.

If the patient is having difficulty in breathing, the accessory muscles of inspiration are being brought into play, and there is indrawing of the intercostal spaces, epigastrium, suprasternal and supraclavicular fossæ, and the patient is becoming cyanotic, an emergency tracheotomy should be performed to give the patient air and to save his life—not for the purpose of removing the foreign body.

If there is no emergency we should have the patient describe the foreign body's apparent location. If it is described as being above the level of the larynx, we may be

fairly certain that it is in the vicinity of the pharynx. While the external referred location may be helpful as to the side on which the foreign body may be, it is of slight value to us in localizing the object itself. When the foreign body is in the upper part of the esophagus, between the level of the cricopharyngeus (the upper pinch-cock of the esophagus at the level of the cricoid cartilage) and the entrance to the thorax, it is usually located by the patient as being in the region of the thyroid cartilage on one side or the other. When foreign bodies are lodged in mid-esophagus, the external location is uncertain, but they are usually felt behind the upper part of the sternum or between the scapulæ.

Patients with pharyngeal foreign bodies can usually swallow liquids or well-chewed bread, but complain of pricking or scratching. Patients with esophageal foreign bodies that do not occlude the esophagus, can also swallow fluids and soft, well-chewed foods, but complain of pain in the region of the offending object. When the foreign body or the swelling that it has produced, nearly occlude the esophagus, swallowing is difficult or impossible, and cough may result from the overflow of ingested materials or saliva into the larynx. Rarely a foreign body will be so located in the esophagus that it will make pressure on the trachea and cause cough or dyspnœa.

Foreign bodies in the tracheobronchial tree, other than vegetal bodies, may cause no cough, pain or other symptoms, even if they have been present for a period of time. Foreign bodies in the trachea may cause intermittent dyspnœa by valve action against the under side of the glottis. Any type of foreign body may cause an atelectasis or collapse of part or all of a lung by blocking its bronchiole or bronchus. Vegetal foreign bodies, particularly peanuts, soon set up an intense inflammation that may simulate bronchopneumonia.

After obtaining a history and making an examination of the patient, the mouth, nasopharynx and pharynx should be carefully

inspected. The hypopharynx and larynx should be examined with a laryngeal mirror. Fluid in the piriform sinuses (the funnel-like openings into the esophagus on either side of the larynx) suggests an obstruction in the esophagus—Jackson's sign. Blind palpation of the pharynx, hypopharynx and larynx may force an easily removable object into the upper esophagus or trachea.

When a fair-sized foreign body is loose in the trachea, we may hear with a stethoscope, held before the patient's mouth, a slap as the object is blown against the under side of the glottis. This may also be palpated when the fingers are placed on the trachea.

Occasionally a foreign body in the trachea or larger bronchi will be so situated that passing air currents will produce an asthmatoïd wheeze.

Foreign bodies may occasionally be dislodged by holding the patient upside down. Esophageal foreign bodies may be dislodged as a result of vomiting induced by emetics. This is not an entirely safe method when sharp-pointed objects are involved.

The bristle probang is to be condemned. It is blindly introduced, then opened and withdrawn, sharp-pointed bones or other such objects so entangled may perforate the walls of the esophagus, leading to a fatal mediastinitis.

Largely through the efforts and teachings of Dr. Chevalier Jackson, the art of removing foreign bodies from the food and air passages by the aid of electrically-lighted tubes and specially-designed forceps has been developed.

We have performed over three hundred endoscopies with no mortality or morbidity. Patients have little or no post-operative discomfort. Sixty per cent. of all of our endoscopic cases have been done under local or no anesthesia. In these instances the patient is told that he will be made uncomfortable, that he will feel as if he were going to choke, but that that is the last thing that we will allow him to do.

Since the instruments used are unlike

those employed in other surgical fields, and the operator cannot look away from the tube mouth, a specially trained nurse is required to pass instruments. The head must also be held in the proper manner by an assistant, therefore the bronchoscopist cannot go to the patient, but the patient must come to the bronchoscopist.

Foreign body work is rarely emergency. We double our difficulties if we attempt to work on a patient with a full stomach. Rest over night, following a full dose of morphine, not only puts the patient in a good condition for an endoscopy the next day, but the resulting relaxation may permit an esophageal foreign body to pass.

All patients should be studied before the fluoroscope, and antero-posterior and lateral X-ray pictures should be taken. Since a suspected foreign body may be anywhere between the nasopharynx and the tuberosities of the ischia, this area should at least be examined with the fluoroscope. X-ray examination often informs us of the type of foreign body with which we are to deal and gives the position of sharp points or ends,

and permits us to make plans for its removal.

Foreign bodies in the tracheobronchial tree, non-opaque to the X-ray, may suggest their presence by characteristic shadows in the lung fields. If a foreign body acts as a ball valve, permitting air to enter the affected area and little to leave, a relative emphysema is produced, and that side appears lighter on the X-ray film. If, however, the foreign body completely blocks a bronchus or bronchiole, the contained air is absorbed, secretions poured out, and an atelectasis develops, the affected part appearing darker on the X-ray film.

Foreign bodies in the esophagus, non-opaque to the X-ray, may be outlined by a swallow or two of a barium mixture. Abnormal splitting of the barium stream as it goes down the esophagus is worthy of note. An increase in the normal width between the trachea and the vertebral column is suggestive.

In performing bronchoscopic work we keep two maxims in mind: "If we can do the patient no good, at least we will do him no harm." "A living patient may be operated upon again."

COINS AND BUTTONS IN THE ESOPHAGUS

No.	Age	Foreign Body	Location	Anesthesia	Tube	Problem	Forceps	Point of Seizure	Result
10322	22 mos.	Nickel	Below cricopharyngeus 1 day	Ether	5 mm.	None	Side curved	Flatwise	Extraction cure
STH	3 yrs.	Penny	Below cricopharyngeus 1 day	Ether	5 mm.	None	Side curved	Flatwise	Extraction cure
13237	1 yr.	Penny	Below cricopharyngeus 2 days	None	5 mm.	None	Forward grasping mosquito	Flatwise	Extraction cure
16261	2 yrs.	Penny	Entrance to thorax 2 days	Ether	5 mm.	None	Forward grasping mosquito	Flatwise	Extraction cure
MEEI	7 yrs.	Penny	Below cricopharyngeus 1 day						Passed into stomach
15778	3½ yrs.	Overcoat button	Entrance to thorax 1 day	Ether	5 mm.	None	Forward grasping mosquito	Flatwise	Extraction cure
9509	2 yrs.	Button	Below cricopharyngeus 1 year (?)	Ether	5 mm.	Button partly buried in granulations	Forward grasping mosquito		Parents signed a release and took baby home

COINS IN THE ESOPHAGUS

These children were brought for examination because of difficulty in swallowing.

The X-ray films revealed the coins broad side on in the esophagus at the entrance to the chest.



CASE 10322—Nickel in Esophagus.

Case MEEI was X-rayed in another city and the shadow of the coin was seen at the entrance to the chest. After a night's rest the child was brought to Portland. There a second X-ray showed that the coin had passed into the stomach. Later it was passed by rectum. This illustrates the value of rest and relaxation.

BUTTONS IN THE ESOPHAGUS

In case 15778, the shadow of the button was not at first seen in the X-ray film. Fortunately the parents had a duplicate button. When X-rayed it cast but little shadow. Re-examination of the X-ray film outlined the button.

Case 9509 was first seen because a wheezy, croupy breathing had persisted for a year. X-ray clearly demonstrated a foreign body. Endoscopy revealed a button partly buried in the party wall between the esophagus and trachea. After working twenty minutes we were unable to grasp the button. We felt that a living patient could be operated upon again and decided to make a second attempt in a few days. The parents were Polish and signed a release and took the baby home. The presumption is that the baby died some months later from a pneumonia or a mediastinitis. (I have seen Dr. Tucker of the Jackson Clinic have difficulty with a similar case.)

MEAT AND FISH IN THE ESOPHAGUS

No.	Age	Foreign Body	Location	Anesthesia	Tube	Problem	Forceps	Point of Seizure	Result
12236	72 yrs.	Meat	Below crico-pharyngeus 2 days	None	9 mm.	None	Side curved	Piecemeal	Extraction cure
15389	69 yrs.	Meat	Entrance to thorax 1 day	None	9 mm.	None	Side curved	Piecemeal	Extraction cure
16067	78 yrs.	Fish	Below crico-pharyngeus 2 days	None	9 mm.	None	Side curved	Piecemeal	Extraction cure
18706	56 yrs	Meat	Below crico-pharyngeus 1 day						Passed into stomach
16308	62 yrs.	Meat	Below crico-pharyngeus 1 day						Passed into stomach
21883	60 yrs.	Chicken	Esophagus filled from diaphragm	None	9 mm.	None	Side curved and bead	Piecemeal	Extraction relief

When a bolus of meat or fish lodges in the esophagus the possibility of an underlying carcinoma or stricture should be considered.

These patients were unable to swallow saliva. Mirror examination showed that the piriform sinuses were filled with saliva, which occasionally overflowed into the larynx, causing cough.

In cases 18706 and 16308, rest over night,

following full doses of morphine, obtained sufficient relaxation so that the offending food masses passed into the stomach.

CHICKEN IN THE ESOPHAGUS ABOVE A CARCINOMATOUS STRICTURE

Case 20956 lived in a neighboring city. She had been unable to eat solid food for eight weeks, but, before coming to Portland for examination, she ate a chicken dinner. Her esophagus was practically occluded at the diaphragm by a cancer. A swallow of a barium mixture outlined the food mass extending up to the entrance to her chest. It was removed piecemeal through the esophagoscope. Subsequently a piece of tissue was removed from the growth, which microscopic examination proved to be carcinoma. At a still later date radon seeds were inserted

into the growth, which relieved her symptoms somewhat and prolonged her life beyond that usually expected in esophageal cancer.

FISH BONES ABOUT THE PHARYNX

Fish bones usually lodge about the pharynx. The following tabulation shows the location in which fish bones were discovered in this area in forty-two instances.

Tonsils,	17
Pharynx,	8
Tongue above epiglottis,	7
Side of tongue near epiglottis,	5
Nasopharynx,	2
Between epiglottis and tongue,	2
Larynx,	1
	42

(These were not endoscopic cases.)

BONES IN THE ESOPHAGUS

No.	Age	Foreign Body	Location	Anesthesia	Tube	Problem	Forceps	Point of Seizure	Result
8766	24 yrs.	Fish bone	Below cricopharyngeus 1 day	Ether	9 mm.	None	Side curved	Presenting end	Extraction cure
20497	56 yrs.	Fish bone	Mid-esophagus 1 day	None	9 mm.	To dislodge sharp ends	Rotation	Sharp end	Extraction cure
17526	26 yrs.	Fish bone	Below cricopharyngeus 2 days	Ether	9 mm.			Dislodged by passage of scope	
17919	37 yrs.	Fish bone	Below cricopharyngeus 2 weeks	None	9 mm.			Dislodged by passage of scope	
19145	35 yrs.	Fish bone	Below cricopharyngeus 2 weeks	None	9 mm.			Dislodged by passage of scope	
8915	33 yrs.	Fish bone	Below cricopharyngeus 2 weeks	Ether	9 mm.	Introduction of scope Short, thick-necked patient		Abrasion in esophageal wall	
8917	39 yrs.	Fish bone	Below cricopharyngeus 2 weeks	Ether	9 mm.			Abrasion in esophageal wall	
14106	69 yrs.	Chicken bone	Below cricopharyngeus 2 days	Ether	9 mm.	Disengage bone	Side curved	One end rotation	Extraction cure
14370	52 yrs.	Pork bone	Below cricopharyngeus 2 days	Ether	9 mm.	Disengage corners of bone	Side curved Rotation for- ceps slipped	One corner rotation	Extraction cure
22112	33 yrs.	Pork bone	Below cricopharyngeus 2 days	None	9 mm.	None	Side curved	Small diameter	Extraction cure

Bones in the esophagus are usually too small to be shown by the X-ray. They may be suspected by the increase in space between the trachea and spine and may be rendered visible by having the patient swallow a barium mixture.

Fish bones in the esophagus cause sharp pain on swallowing. The principal problem of their removal consists of disengaging the bone so that the esophageal wall is not injured. "A trailing point does not perforate." (Chevalier Jackson.)

In case 20497 the bone was lodged in the

mid-esophagus, and the pain was referred between the scapulæ and under the sternum. Pain from a similarly located carcinoma is referred to the same area.

Cases 8915 and 8917 were first seen a few days after they had swallowed fish bones. X-ray and fluoroscopic studies were negative. It was felt that the discomfort on swallowing was due to abrasions caused by the fish bones. At the end of a week they still complained and were then esophago-scoped. No foreign bodies were seen and their recovery was uneventful.

SAFETY PINS IN THE HYPOPHARYNX

No.	Age	Foreign Body	Location	Anesthe-sia	Tube	Problem	Forceps	Point of Seizure	Result
47A	1 yr.	Open safety pin 1 day	Hypo-pharynx	None		Rotation to trail point	Hæmostat	Near keeper	Extraction cure
47B	14 mos.	Open safety pin 1 day	Hypo-pharynx	None		Rotation to trail point	Hæmostat	Near keeper	Extraction cure
6940	3 yrs.	Open safety pin 1 day	Keeper behind larynx, spring below crico-pharyngeus, point buried	Ether	5 mm.	Pin large, stiff; unable to get point into tube, pushed into stomach and rotated	Rotation	Spring	Extraction cure



CASE 47A—Safety Pin in Hypopharynx.

In cases 47A and 47B, the open safety pins were quickly removed by grasping the

pin near the keeper with a curved and rotating the pin so that the sharp point trailed.

In case 6940, efforts to dislodge the pin at home succeeded in forcing it into the upper esophagus, so that only the keeper could be seen behind the larynx with the laryngeal mirror. Blind efforts at removal had made a relatively simple case exceedingly difficult.

In case 14108, fluoroscopic study showed that the column of barium mixture split at the region of the foreign body.

In case 16662, the plum stone did not show on X-ray until the patient swallowed a barium mixture.

MISCELLANEOUS FOREIGN BODIES IN THE ESOPHAGUS

No.	Age	Foreign Body	Location	Anesthesia	Tube	Problem	Forceps	Point of Seizure	Result
14108	76 yrs.	Clam shell	Entrance to thorax 1 day	None	9 mm.	None	Side curved	Flatwise at presenting end	Extraction cure
16662	58 yrs.	Plum stone	Entrance to thorax 2 days	None	9 mm.	None	Side curved	Lesser diameter	Extraction cure
17499	5 yrs.	Brooch pin, open	Entrance to thorax 1 day	Ether	5 mm.		Side curved	Flatwise	Extraction cure
20470	7 mos.	Orange seed and collar button	Entrance to thorax Unknown	None	5 mm.	Did not suspect presence of orange seed To turn button to make post present	Forward grasping mosquito	Seed lesser diameter, collar button post	Extraction cure
23439		Safety pin	Mid-esophagus 3 days	Ether	9 mm.	Not to override	Rotation	Spring	Extraction cure



CASE 17499—Brooch Pin in Esophagus.

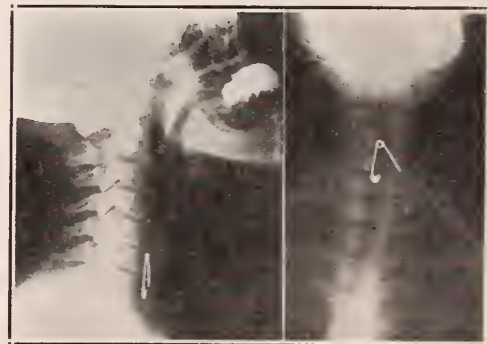
In case 17499, the mother thought that the child had swallowed a common pin. We were astonished to see the shadow of a brooch pin when the child was fluoroscoped.

Case 20470 entered the Children's Hospital because of swellings in the region of the right upper costal cartilages, in which region the X-ray revealed fractured ribs and more amazingly a collar button in the child's esophagus. There was no history of cough or difficulty in swallowing. When the esophagoscopy was performed a large orange seed was found above the collar button.

Case 23439 had false teeth. When retiring in the dark she laid a buttered pilot bread on the dresser. Before stepping into bed she bit the pilot bread and felt something stick in her throat. Upon lighting



CASE 20470—Collar Button in Esophagus.



CASE 23439—Safety Pin in Esophagus.

the light she saw a safety pin lying on the remains of the cracker, and reasoned that she had swallowed another pin that she had taken out of her clothes. X-ray showed the shadow of an open safety pin in her esophagus.

FOREIGN BODIES IN THE TRACHEOBRONCHIAL TREE

No.	Age	Foreign Body	Location	Anesthesia	Tube	Problem	Forceps	Point of Seizure	Result
MEE2	24 yrs.	Small, open safety pin	Right main bronchus 4 days	Ether	9 mm.	Very tall man with long neck			Sent to Chevalier Jackson
16869	1 yr.	Egg shell	Trachea below vocal cords 11 days	None	Infant laryngoscope	Subglottic edema	Alligator	Flatwise	Extraction cure
12915	1½ yrs.	Peanut	Right main bronchus	None	4 mm.	Regurgitating milk curds Intended to try again later			Parents signed a release and took baby home
23184	3 yrs.	Peanut	Right main bronchus 3 mos.	Ether	4 mm.	Peanut swollen too large to readily pass the glottis Stripped off twice	Forward grasping mosquito	Lesser diameter	Extraction cure
23400	2 yrs.	Peanut	Right main bronchus 2 days	None	4 mm.	Peanut brittle removed in four pieces	Forward grasping mosquito	Lesser diameter	Extraction cure.

In case MEE2, Mr.———was lying on a couch laughing, when a small, open safety pin was dropped into his mouth by his two-year-old son. The pin disappeared. He had no cough, no pain, no symptoms, but he was sufficiently disturbed mentally to have an X-ray taken of his chest two days after the accident. The open pin was located at the entrance to his right middle lobe bronchus. Two days later we were unsuccessful in removing the pin as the patient was unusually tall, had an extremely long neck and our instruments were short. The pin was subsequently removed at the Chevalier Jackson Clinic under fluoroscopic guidance with longer instruments.

Case 16869 was a year and five days old. Eleven days before its entry to the hospital it had a wheeze that was thought to be asthma. A consultant suggested the possibility of a foreign body. The child was brought to Portland and a direct laryngos-

copy revealed an eggshell lying antero-posteriorly between and below the vocal



CASE 16869—Egg Shell between Vocal Cords.
Subglottic Edema.



CASE 16869—Egg Shell Removed, Subglottic Edema Remaining.

cords. There was a great deal of subglottic edema. The eggshell was removed, but the obstruction caused by the subglottic edema necessitated a tracheotomy. The child was sent home well in ten days.

Case 12915 was eating peanuts and choked. Two days later she had the physical signs of bronchitis without temperature. Her physician suspected a foreign body in her tracheobronchial tree. The X-ray films showed an atelectasis of the right lung. Unfortunately she had been given milk before the endoscopy was performed, and the regurgitation of the curds interfered with vision. The procedure was postponed until the next day, but the parents signed a release and took the child from the hospital. Ten days later it died from "pneumonia."

Case 23184, aged three, three months before entering the hospital was eating salted peanuts. She was not permitted to accompany her father and cried and choked. For the next few hours she had great difficulty in breathing, but slept well during the night. The following night she again had a severe choking spell. The next day a physician was called, who thought that she had bronchitis. She was kept in bed a week. From that time until three weeks

before entry she had occasional coughing spells and always wheezed; she then began to have more frequent choking and strangling attacks. During this time she lost weight, and her mother noticed a bad odor to her breath. She was then seen by another physician a few days before her entry to the hospital, and a history of the choking attack when eating peanuts was obtained. A foreign body was suspected and an X-ray taken. The parents stated that the shadows of three peanuts were seen in the X-ray. Peanuts do not cast such shadows. However, as a result of the careful history taken by the physician the child was sent to the Maine General Hospital. Examination of her chest after entrance to the hospital revealed râles and a noisy wheeze at about the right mid-scapular region, suggested air passing a foreign body. The results of the X-ray examination were practically negative, except that the diaphragm on the affected side was slightly high, and the lung was less well aerated. The bronchoscopy was largely done on the strength of the history. It is always difficult to see through a 4 mm. tube. The peanut was swollen and stripped off twice at the glottic chink before it was brought through. The tracheobronchial mucosa was inflamed, and there was a small amount of pus in the right main bronchus.

In case 23400, the child was eating salted peanuts, laughed, aspirated a peanut, and had a severe strangling spell. A physician was called, who obtained the history and sent the child to the Maine General Hospital. The physical signs consisted of a peculiar rattly cough and wheeze that was audible when standing near the child. It had periods of breathing easily, followed by choking spells. Stethoscopic examination over the right main bronchus revealed a noisy wheeze but no moisture. The peanut was very brittle and was removed in four pieces. The child made an uneventful recovery.

47 Deering Street.

Fractures of Mandible and Maxilla, and Treatment

By RALPH H. HUTCHINSON, D. D. S., Portland, Me.

Exodontist, Maine General Hospital

Fractures of the jaws present entirely different problems from fractures of any of the other bones of the body. Complications frequently arise, due to the impossibility of asepsis being maintained in the mouth. Also, fixation of the jaws is difficult to control on account of the constant pull of the muscles of mastication, and cannot be accomplished successfully by bandaging alone, but must have some form of interlocking of the teeth on the inside of the mouth.

The result to be attained in treating a fracture of the jaw when the full complement of teeth or most of them are present is to restore normal articulation. If this is not accomplished the reduction is a failure, for a malocclusion and a disfigurement of the facial contour has taken place, and the patient's masticatory process has been impaired. In an edentulous mouth it is not as important if the reduction is not perfect, since the contour of the face and the articulation may be taken care of in the construction of artificial dentures.

Frequently complications in the form of infections of the intra and peri-mandibular tissue result from a fractured jaw. These infections may be followed by cellulitis, abscesses, necrosis and sinuses. Pneumonia sometimes occurs from inhalation of septic matter. Infection usually follows compound and comminuted fractures; when this happens there is delayed union or non-union of parts. In many neglected cases, when the parts have not been properly reduced and fixation applied, infection also occurs.

Fractures of the mandible are much more common than those of the maxilla. However, with the advent of the automobile, fractures of the maxilla are increasing. This is due to a sudden stopping of the car, and the projection of the victim's face or head against the steering wheel or the windshield.

Fractures of the mandible are of four types:

- (a) Greenstick.
- (b) Simple.
- (c) Compound.
- (d) Comminuted.

They are usually of a compound nature and in many cases are comminuted.

Fractures of the mandible may be caused by kicks, blows, bullet wounds, necrosis, or any undue outside force. The most frequent seat of fracture is in the region of the mental foramen, for the bone here is weakened by the attenuated internal structure. The center of the curve in the body of the mandible is at this point and the large socket of the canine tooth is also situated in this region. Fractures may occur at the angle, between the angle and the mental foramen, and at the symphysis menti. The body of the ramus, and the condyloid and coronoid processes are protected by the overlying muscles, and fractures at these points were rare. However, with the increasing automobile accidents, fractures of this type are more common.

Symptoms of a fractured mandible are sharp pain (caused by pressure or pinching of the inferior dental nerve), crepitus, loss of function and swelling. Deformity of the jaw (due to malocclusion of the teeth) is usually evident if the fracture is in the portion of the jaw which is dentulous. The teeth anterior to the fracture will be on a lower level than those posterior. This is caused by the depressor muscles and gravity, pulling downward on the anterior segment, while the pterygoids and the levator muscles lift the posterior fragment.

In treating a fracture of the mandible, where the fracture occurs between the teeth or at the neck of the condyle and the upper teeth are present, the eyelet wiring method is used to the best advantage. Brass wire

six inches long, gauge twenty-five, is doubled, and an eyelet is twisted on the closed end. The eyelet is then placed between two teeth approximating each other, and the loose ends of wire are passed around the tooth on either side and are ligated. This procedure is carried out around the teeth on both the upper and lower jaws until there are from four to six eyelets on each jaw. With wires about three inches in length, the eyelets on the upper and lower jaws are connected, and the strands are twisted until the teeth are in normal articulation. Fixation should be maintained until the fracture is united. The advantage of this method is that by cutting the connecting loops the mouth may be opened for cleansing at any time without disturbing the eyelets on the teeth.

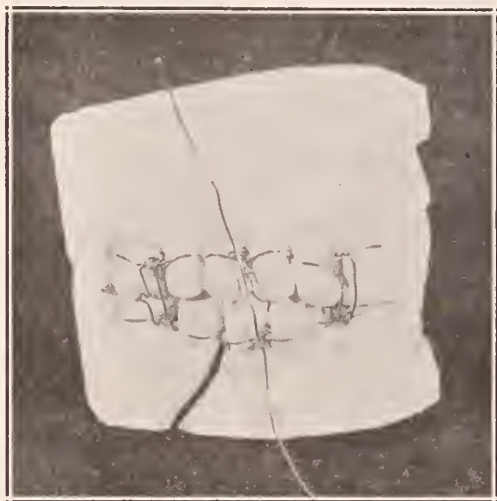


FIGURE ONE.

Figure One: Illustrates the eyelet wiring method.

When the upper teeth are missing the fracture is reduced and a continuous metal cap splint is cemented to the lower teeth.

If a fracture occurs at the angle of the ramus distal to the last molar, a continuous metal cap splint, with a saddle extending back on to the anterior border of the ramus, is used and fixation secured by wiring to the upper teeth.

Another type of splint is employed in cases where muscle pull exerts pressure, and it is impossible to reduce the fracture with

eyelet wiring because of teeth missing on either side of the fracture. This is a cast German silver interdental splint with lock bolts, which is cemented to both the upper and lower teeth. The bolts are removed at any time, so that the mouth may be opened and cleansed. The Figure 8 bandage is used effectively in these cases.



FIGURE TWO.

Figure Two: Illustrates a horizontal compound fracture of the mandible with a powerful muscle pull. The teeth are missing on the side of the fracture from the lower right second molar to the lateral incisors on the left.



FIGURE THREE.

Figure Three: Shows the cast German silver splint, with lock bolts, cemented in place, and the fracture in process of reduction, which of necessity was gradual on account of edema.

In an edentulous mouth a cast German silver splint is made for both the upper and

lower jaw. Stanchions are soldered to each to maintain the proper distance between the jaws. In fractures of this type fixation is accomplished by applying a modified Barton or Figure Eight bandage.



FIGURE FOUR.

Figure Four: Shows the cast German silver splint which is used in reducing a fracture in an edentulous mouth.

Fractures of the maxilla fall under one of the following heads:

- (a) Fracture of the alveolar process.
- (b) Unilateral fracture across the facial aspect above the roots of the teeth and through the hard palate.
- (c) Bilateral horizontal fracture above the hard palate and below the orbital plates.
- (d) Extensive comminution and crushing of the upper part of the maxillæ, complicated by a fracture of the nasal and other bones.

Fractures of the alveolar process may be caused by sudden blows which break off teeth. In the extraction of teeth the tuberosity is often fractured, especially in the third molar region.

Unilateral fractures are caused by direct force coming from in front or from the side. Bilateral horizontal fractures are caused by direct force from in front. Displacement is due to the force of the blow and not to the muscle pull, as happens in the mandible, and is usually downward in the posterior region, and upward and backward in the anterior region. Fractures with comminution may occur from gunshot wounds, or

from some very severe trauma from below. Infection of the nasal fossa and sinuses is common, and meningitis is not an unusual complication following these cases.

In treating a fracture of the alveolar process, the completely detached fragments are removed. If the process is not detached it is put into proper position, and fixation is attained by means of a splint, or an arch wire, fastened to the teeth in the loose fragment and to those in the sound part of the jaw.

Reduction of a unilateral fracture is accomplished by pushing the fragment back into occlusion with the lower teeth. Fixation is attained by using eyelet wiring from the sound teeth on the opposite side to the mandibular teeth, or by using an arch wire, bent to fit around the upper arch, and lugs or hooks attached to it on the labial and buccal sides for elastic traction to work from the mandibular teeth.

A bilateral horizontal fracture may be treated by cementing a continuous metal cap splint to the upper teeth. Heavy extra-oral silver wire arms, gauge 10, are soldered to each side of the splint. These arms extend anteriorly to the corner of the mouth, and distally along the outer surface of the cheeks to the area in front of the ears. The arms are used for attachment to a plaster head cap. This is called a reversed Kingsley splint. A bilateral fracture may also be treated by gradual reduction, using elastic traction applied from the lower jaw to the upper jaw. This is accomplished by ligating an arch wire to the teeth on both upper and lower jaws. As many lugs as necessary are soldered to each arch wire for the use of elastic traction.

Figures Five and Six: Show a bilateral horizontal fracture of the maxilla complicated by comminution of the bones of the nose, and a depressed fracture of the malar bone on the right side of the face, the maxillæ being driven upward in the anterior region, and downward and to the right in the posterior region. Note the space of about

an inch between the anterior teeth before treatment.

gated to the lower teeth to the lugs which were attached to the anterior portion of the splint on the upper jaw.



FIGURE FIVE.



FIGURE SEVEN.



FIGURE SIX.



FIGURE EIGHT.

Figures Seven and Eight: Show the same case as figures five and six after treatment has taken place.

Gradual reduction in this case was obtained by the use of a plaster paris head cap and a reversed Kingsley splint, which lifted the posterior portion of the jaw. Elastic traction was applied from the arch wire li-

When treating a fracture with extensive comminution and crushing of the upper part of the face, it is wise to look after the general physical condition of the patient before attempting to reduce the fracture or to replace bones. Drainage should be established from the nasal sinuses, and frequent irrigation is necessary.

Traction in these cases cannot be used against the skull, as the length of the face would not be preserved. However, traction may be applied to the maxilla by arch wires,

or by a yoke from below the chin, as in fractures of the hip or shoulder.

Radiographs are indispensable in diagnosing fractures of the jaws. They should be taken in all cases before any attempt is made to reduce the fracture. They should also be taken from time to time, as the case progresses, to determine the exact condition.

In all fractured jaw cases where the splints are not cemented to the teeth, the splints should be removed every few days and thor-

oughly cleansed. The mouth should be irrigated every two hours at first, and should be kept as clean as possible. A liquid diet must of necessity be given, but a sufficient number of calories may be taken to maintain a normal body metabolism. Care should be exercised to keep the patient in good physical condition, since this plays an important part in the successful treatment of all fractures.

Case Record of the Central Maine General Hospital

Edited by JULIUS GOTTLIEB, M. D.; Assisted by MAURICE DIONNE, M. D.

CASE II

LOSS OF WEIGHT, EPIGASTRIC DISCOMFORT AND PERSISTENT VOMITING

PRESENTATION OF CASE

Dr. M. S. F. Greene: This patient is a thirty-nine year old white American housewife, who entered the hospital December 19th with a history of persistent emesis and inability to retain food of three weeks' duration.

The patient "never had a sick day" until July, 1928, when she began to notice a loss of appetite and of weight. She attributed this to a slight strain while washing the floor. Soon afterward she noticed a burning sensation, a persistent gnawing distress, and "a bunch in her stomach" after eating. Three months later a diagnosis of peptic ulcer was made and she was placed on a bland diet, received alkaline powders and was put to bed. She soon began to vomit occasionally and one month later she could not retain anything in her stomach. At this time an X-ray of her stomach was taken and a diagnosis made of pyloric obstruction probably due to malignancy. The vomiting persisted in spite of treatment, and her weight dropped to 100 pounds. Five months later she stopped all medical treatment, began to gain rapidly and in a few months again weighed 170 pounds and was as well as ever.

In April, 1931, the patient again began

to notice a loss of appetite and weight. Soon a bothersome gnawing feeling and a sense of fullness of the stomach appeared even after the ingestion of small amounts of food, and she felt as if there was a ball in her stomach. Two months later, June, 1931, she began to vomit occasionally, usually a few minutes after eating, and this relieved the epigastric distress. In July, 1931, she was somewhat shaken up in an automobile accident and began to vomit more frequently and soon began to tolerate only liquids. This vomiting never was projectile, did not contain any fresh blood or "coffee ground" material. She experienced no actual epigastric pain. Bowel movements were small and soft, never clay-colored and never "tarry." By November 15th the weight dropped from 169 to 114 pounds. At this time a diagnosis of pyloric obstruction, probably due to a chronic gastric ulcer, was made and the patient placed on a Sippy diet, with atropine gr. 1/150 t. i. d. On this régime she vomited less frequently, but soon complained of blurred vision. The atropine was stopped. Her stomach felt full after a two-ounce mixture of milk and cream, and she felt better and vomited only twice after attempting to take one-half ounce of farina. She lost, however, seven pounds dur-

ing the ensuing two weeks. In early December, 1931, the house where she lived caught fire, and this event initiated a period of persistent vomiting and loss of weight.

The family history is negative, except that one half-sister died at the age of thirty-three of pulmonary tuberculosis.

In the past, the patient had had severe bilateral frontal headaches, lasting about two days. These required rest in bed and were not associated with vomiting. They had occurred about once a year ever since childhood. Wearing glasses did not relieve these headaches. In 1909, an appendectomy was done. Venereal diseases were denied by name and symptoms.

Physical examination showed a well-developed, poorly nourished woman who showed marked evidence of recent loss of weight. The pupils were equal and reacted to light and accommodation. There was no inflammation of the eyes, no strabismus, no nystagmus. There was no bony deformity of the nose. The septum was intact. The teeth were excellent and normal in shape. The lungs and heart were within normal limits. The radial pulse, however, was smaller on the right. The abdomen was scaphoid and negative except for a larger area of tympany than normal over the stomach area. The temperature was 97.6° F., the respiration 20, the pulse 80. The blood pressure was 108/60. The urine showed the slightest possible trace of albumen on four occasions and a slight trace on one. Its specific gravity varied from 1.010 to 1.027. Few to frequent leucocytes were found in the sediment. There was no acetoneuria. There was occult blood in the specimens of vomitus submitted. Shortly after admission, the hemoglobin was 75 per cent., the red count 4,600,000 per cubic mm. of blood, and the white count 8,600 per cubic mm. of blood. Sixty-five per cent. polymorphonuclear leucocytes, 34 per cent. lymphocytes and 3 per cent. monocytes were found. On two examinations of the serum, the Kahn and Kline Young tests were 4 plus.

In the hospital, the vomiting was of a watery character and often greenish fluid was quite persistent. The patient was unable to retain any food during the first week. She received 460 cc. of glucose intravenously and

400 cc. subcutaneously on the second day of hospital residence; 1,000 cc. were administered on the fourth day. She also received protoclyses of 5 per cent. glucose daily during her entire hospital stay. There was an addition of 45 minims of saturated solution of potassium iodide after the first week. During the second and third week, the intake and retention of food improved. During this period the patient began to complain of visual disturbances, which grew steadily worse, so that at times she was completely blind. On the 13th of January, the patient showed a marked bilateral strabismus. During this period the patient also showed mental symptoms, varying from restlessness to irrationality. During the fourth week, the patient was irrational most of the time and was incontinent.

As stated above, antiluetic treatments were started after the first week. Potassium iodide was given in the rectal administration of glucose and four intramuscular injections, 0.23, 0.32, 0.40 and 0.40 grams, respectively, of sulpharsphenamine were given. The diet consisted chiefly of orange juice, and on a few occasions custard and junket were ordered. Mercury inunctions were also given daily, except for weekly intervals of two days. The patient became extremely drowsy and irrational, and died on the 14th of January.

CLINICAL DISCUSSION

Dr. M. S. F. Greene: A diagnosis of gastric ulcer with pyloric obstruction, probably due to scar tissue, seemed at first to be the only tenable one. A gastric malignancy, which to the roentgenologist appeared very probably, inoperable in October, 1928, and again in 1929, would not in our experience have later allowed normal function of the stomach for more than a year. The confusing roentgenographic appearance of the stomach, together with the clinical picture, suggested the possibility of a luetic gastric involvement, and when the serology was found to be positive, a diagnosis of luetic ulcers of the stomach was made. The reason for assuming multiplicity was the comparative rarity of a single ulcer of this type. Either a gastric malignancy or a luetic tumor mass of considerable size would have been

readily palpated in this emaciated coöperative patient. Coincident with the beginning of antiluetic therapy the patient's condition improved until she was able to ingest and retain a soft-solid diet. It was felt that her ultimate recovery was very probable until evidence of a central nervous system abnormality appeared, which finally became so severe that the patient became entirely uncoöperative, and, although emesis was infrequent and a fair colonic intake was maintained, coma supervened and death.

Dr. Soma Weiss: Obviously, the differential diagnosis in this case rests between gastric ulcer, syphilis of the stomach and malignancy. Any of the three conditions may be associated with repeated vomiting, considerable loss of weight, and the other symptoms described. The fact that the patient had a positive serology, acute cerebral symptoms and a filling defect of the stomach, revealed by X-ray, does not justify one in jumping to the diagnosis of syphilis of the stomach. Although syphilis of the stomach is diagnosed recently more often than in the past, it is still an unsettled issue whether or not the diagnostic criteria used to-day for syphilis of the stomach are especially reliable. As a rule, if an individual shows a defect of the stomach, which, on X-ray examination is indistinguishable from carcinoma, if the patient is relatively young, if the serology is positive, and if objective and subjective improvement follows specific therapy, the diagnosis of syphilis of the stomach may be made. One should remember, however, that occasionally large ulcers, with inflammatory reaction surrounding the lesion, can give considerable obstruction, which later goes into partial or complete healing. Therefore, remissions in the course of an obstruction do not necessarily indicate syphilis of the stomach, even in the presence of positive serology. As a matter of fact, occasionally one sees temporary improvement even in carcinoma of the stomach. We should, therefore, be exceedingly conservative in making the diagnosis of syphilis of the stomach.

Personally, I do not feel very definite regarding the diagnosis in this case, but if the filling defect is really due to an organic lesion, I would be more inclined to diagnose

malignancy than syphilis. Occasionally it is well known that reflex disturbances from the neighbor organs or from other nervous causes may produce an apparent filling defect on X-ray examination. In such instances it is advisable to administer to the patient 1/60 to 1/25 gram of physostigmine salicylate by mouth and to repeat the X-ray examination. Physostigmine increases both the motility and tone of the muscular wall of the stomach, and often one can prove that a filling defect is only a functional one in this way.

Dr. E. C. Higgins: On several occasions I have seen parallel cases which showed varying roentgenographic plates which influenced me strongly to consider some physiological dysfunction. It may be of central origin. In this case particularly, we have both cerebral and gastric symptomatology. Dr. Harvey Cushing's recent observations on the presence of peptic ulcer, in some cases showing definite brain pathology in addition to the well-known relationship between mental attitude and gastrointestinal functions, prejudice me still more in this direction. The positive serology is somewhat disturbing, but even in luetics, the betting is safer against gastric syphilis. My impression is that clinicians are prone to diagnose gastric syphilis too frequently, and pathologists too rarely.

Dr. Cunningham: The gastrointestinal X-ray showed no evidence of pathology except in the stomach. The stomach presented a filling defect on the greater curvature, just proximal to the pyloric orifice. It involved about one-third of the greater curvature and was definitely enlarged, atonic and showed considerable evidence of reversed peristalsis. The condition of the stomach wall interfered materially with the peristaltic waves, and on palpation, the wall seemed to have lost its normal flexibility. At six hours, the same filling defect with a larger residue could be seen. Roentgenological diagnosis: pyloric obstruction, probably malignant. This diagnosis was made in October, 1928, and a re-examination in July, 1929, showed the same lesion.

Dr. M. J. Dionne: John B. Fitts reported a study of eight cases of syphilis of the stomach in the *Annals of Internal Medicine* about one year ago. In these cases it is noticeable

that on several occasions the X-ray showed spasm of the pylorus, or deformity, or defects suggesting malignancy. Fitts also stated that the chief clinical symptoms were great loss of weight, secondary anemia, epigastric pain and persistent vomiting, with inability to retain food. This case presents these symptoms, but it must be remembered that syphilis of the stomach is very rare.

CLINICAL DIAGNOSIS (Hospital Record)

Syphilis of the stomach.

Cerebral edema.

ANATOMICAL DIAGNOSIS PATHOLOGICAL DISCUSSION

1. Chronic gastro-enteritis with multiple gastric ulcers.

2. Cerebral edema.

3. Pachymeningitis.

Dr. Julius Gottlieb: There were surprisingly few gross pathological findings to explain the marked retention and apparent obstruction which the clinical history seems to indicate. There were five shallow ulcers in the mucosa of the stomach, one of which was situated at the pylorus and the others in the cardia. Microscopic examination showed a slight mononuclear infiltration of the wall of the stomach, with some evidence of endothelial proliferation. This picture was also found in sections of the small intestine. A diagnosis of chronic gastroenteritis, with multiple gastric ulcerations, can be made with certainty. A diagnosis of syphilis on the basis of the findings is attended with considerable doubt. The opinions of Drs. Mallory and Parker, of the Boston City Hospital, and Dr. Branch, of the Memorial Hospitals, are that a diagnosis of gastric syphilis cannot be made on the microscopic evidence in this case. Some pathologists demand a demonstration of the *treponema pallida* as proof of gastric syphilis. This has been accomplished only by Warthin and McKnee. Were such proof demanded, the incidence of gastric syphilis would be even less than the present estimated frequency of 0.1 per cent. among organic lesions of the stomach. Even those cases of McKnee, where the *spirochaeta pallida* is claimed to have been demonstrated, Singer and Dyas believe the organisms to be the *spirochaete* of Vincent's angina. The

brain showed considerable edema, with rare collections of mononuclear cells in the meninges. The cerebral edema apparently explains the drowsiness, delirium and visual disturbance. Whether we make a diagnosis of gastrointestinal syphilis or not, the microscopic changes are consistent with the clinical picture.

Dr. M. S. F. Greene: I do not quite agree with the statement that gastric syphilis is extremely rare. Carman, in reporting ninety-three cases, says: "To hold the traditional conception of the incidence and distribution of late lesions of the alimentary tract, in cases of acquired syphilis, is an anachronism. Modern scientific methods of diagnosis and treatment, coupled with knowledge gained from histopathologic study of resected material in cases in which operation has been performed erroneously for carcinoma, reveal the fact that gastric syphilis is not as rare as generally supposed. In the light of accumulating knowledge, the attitude that a case of gastric syphilis is not proved without histologic or bacterial confirmation, or both, is unjustifiable." Singer also remarks: "The prevalent notion with regard to the incidence of gastric syphilis is that it is a rare disease. The diagnostic criteria accepted for the recognition of gastric syphilis are the active typical granuloma and *spirochaeta pallida*. If one would apply these criteria to the diagnosis of syphilis of the rectum, for instance, rectal syphilis would likewise fall into the category of rarities." One might add that many years elapsed before it was generally accepted that syphilis was the etiological factor in most aneurysms, and if one has observed the search for *spirochaeta pallida* in pathologic specimens at Warthin's clinic, the great difficulty of finding them is realized. I know of but one disease which will cause multiple ulcers of the stomach, a localized area of meningitis which is grossly apparent, and a positive Kahn on two occasions: this is syphilis.

Dr. Soma Weiss: The study of this patient carries again the lesson that the diagnosis of syphilis of the stomach is difficult and often uncertain. I believe that after the post-mortem examination, we are still unable to state or deny that this patient had it. It

is well known that luetic lesions may disappear from the stomach or from the prepyloric area and leave behind only slight scar tissue which is recognized by the pathologist as a chronic gastritis or benign pyloric hypertrophy or linitis plastica. Of course, the patient did not suffer from carcinoma of the

stomach. It is therefore possible that the defect revealed by the X-ray examination was rather functional than organic. The repeated vomiting and loss of weight may have been due to gastrointestinal upset of central origin.

Social Insurance

By DR. EDWARD H. OCHSNER

Most Governments Are Inefficient or Corrupt—Some Are Both—(Continued)

The founders of our government subdivided it into three branches, the administrative, the legislative and the judiciary. This was done on the theory that each had a distinct function to perform, and that they would all act somewhat as checks and balances upon each other. This seemed logical at the time and undoubtedly has many advantages, but our founders did not and could not foresee one of its dangers and one of the abuses to which this division was to be put, namely, the practice of sidestepping duty and responsibility. One of the chief governmental in-and-outdoor sports today is "passing the buck," with an "open season" the year round.

In a project involving as many problems as Social Insurance does, all the branches of the government would be involved in its execution—the administrative in administering it, the legislative in enacting the necessary laws, and the judiciary in adjudicating them. Let us then examine briefly how the different branches have deported themselves in the more recent past. Let us start by examining just one typical administrative activity of both the federal and the state governments.

Individual members of the medical profession have repeatedly called attention to the great need of a careful study of all delinquents and criminals in our state and federal institutions in order to determine the mental and physical condition of each

member of these two classes, with a view to their rehabilitation and possible reclamation, and yet almost nothing has been accomplished along these lines by governmental agencies. Dr. Frank L. Rector, who recently completed a survey under the auspices of the National Society for Penal Information on health and medical work in all state and federal prisons and adult reformatories, states unequivocally that in not one of these institutions is there a well-rounded balanced medical and health program. While some of them provide acceptable accommodation for the care of the acutely sick or injured, there is little or no provision for the rehabilitation of the physically handicapped, so that they will be better equipped for earning an honest living after their discharge to civilian life.

Just one typical example. On the day Dr. Rector visited the Ohio State Penitentiary, there were four thousand, four hundred seventy-five prisoners within its walls, of which one hundred fifty-six were hospitalized. There was but one physician on the staff, all other attendants at the hospital were prisoners. While the physician was nominally on a full-time basis, he was carrying on an outside private practice, as his salary from the state was insufficient to meet his living expenses. What can one part-time physician accomplish with that many patients, a large per cent. of whom are physically handicapped, mentally abnormal

and emotionally maladjusted? Ohio is a fair example. In most of the other penitentiaries, and in the federal prisons, conditions are no better, and in some even worse.

Now let us investigate some of the legislative problems. While nearly every legislative body contains some men of outstanding ability, the great majority of legislators have not the slightest conception of what is required of their position and blindly follow their party bosses, who are not generally known for their altruism, their patriotism, or a burning desire to promote the public welfare. One of the worst features of our legislative activities is the fact that a small, well-organized and insistent minority can usually get its measures enacted into law unless some other group is adversely affected by the proposed legislation and makes a counter-attack.

Another bad method of securing legislation is the system of trading. An interesting occurrence of this sort happened in the State of Illinois in 1923. About that time a Chicago mayor was disgracing not only

his city and state, but the nation, by the slogan, "Hit King George on the snoot." A free citizen from the corn lands of the state decided that he would like to be sent to the state legislature, took up the battle cry, had just one plank in his platform, namely, to make the American language the official language of the state. He was elected. By use of extensive vote trading he secured the passage of the following:

OFFICIAL STATE LANGUAGE

An act establishing the American language as the official language of the State of Illinois. (Approved June 19, 1923. L. 1923, p. 7.) Preamble.

177. (American language.) 1. Be it enacted by the people of the State of Illinois, represented in the General Assembly:

The official language of the State of Illinois shall be known hereafter as the "American" language.

(So much for administrative and legislative inefficiency. The next article will take up the judiciary.)

State Department of Health

Division of Public Health Nursing and Child Hygiene

By EDITH L. SOULE, R. N., Division Director

The Division of Public Health Nursing and Child Hygiene of the State Bureau of Health was created in 1920. The early work of the Division was supervision of public health nursing in the state wherever desired; the establishment of standards for work, so that each service had definite aims; the preparation and adoption of uniform record and report forms; the development of new services and the establishment of regulations regarding qualifications of nurses to be employed in the state for public health work. All these aims have been realized, due to the hearty support of the nurses in the state.

In 1920, there were about thirty public

health nurses in the state. To-day there are about one hundred and fifty doing all types of health nursing and employed by official and private organizations, by industrial plants and clubs. Most of these nurses are sending in monthly reports of their work to this Division, where they are tabulated and studied for progress comparisons.

In 1922, when the federal funds for maternity and infancy work were available, an appropriation of \$5,000.00 was made for the promotion of work for mothers and children of pre-school age by this Division. Work was started in northern Aroostook and Washington Counties. Later, this appropriation was increased, so that we are now able to

employ nurses to work in eight counties. The scope of the work was further enlarged by town appropriations to cover work with the school children in seventy-six towns.

The Division now includes the following personnel: Supervisor of field nurses, eleven field nurses, two clerks and the Director.

Since the funds available were not sufficient to cover work in the whole state, it was deemed advisable to choose only those counties where no work was being done by public health nurses, for pre-natals and children of pre-school age. The counties selected were northern Aroostook, Cumberland, Kennebec, Knox, Lincoln, Oxford, Sagadahoc and Waldo. Within the past two years the Commonwealth Fund has financed a service in Livermore and Livermore Falls, and the service has been placed under the supervision and direction of this Division.

The work of the staff is largely educational, contacts being made with pre-natals, infants, pre-school and school children in the homes, the conferences or schools.

The first contacts in the towns are made with the physician and health officer, to secure their approval of the work and to receive recommendations in regard to the physicians' families.

During home visits, the nurses help the expectant mother in regard to personal habits, the preparation of supplies for her delivery and for the baby, encourages her to plan for breast feeding her baby, and, above all things, the necessity of registering with her family physician for pre-natal supervision at the earliest possible date. Through the efforts of these nurses, many expectant mothers who have never realized the importance of medical supervision, have received this care and realize its value.

Parents are urged to take their children, especially those of pre-school age, to their family physician at regular intervals for medical supervision. The necessity of having artificial feedings regulated by the physician is stressed constantly.

At the conferences, the children are examined by a local physician, and conditions

needing care are called to the attention of the parent, who is urged to consult her own physician for treatment.

No treatments are given at these conferences, even though the examining physician may be the family physician. This prevents any interference with his private practice. Through the nurse's assistance during home visits and conferences, a great many mothers and children visit their physician for advice who would never have sought such service, and all benefit by the contact, the child especially.

As visits are made to homes and schools, with the approval of physicians and health officer, the nurses explain the importance of immunization against smallpox and diphtheria, and where the children cannot be taken to family physicians for such treatments, because of the expense, immunization clinics are developed and the local physicians give the treatments. Last year, 1,521 children were immunized against diphtheria.

During the past twelve years, the maternal mortality has not been greatly changed, but the infant mortality has taken a decided downward curve from 102 deaths per 1,000 births in 1920 to 75.4 in 1930. While the Division does not claim the credit for this improvement, it is gratifying to have been able to help in this work with mothers and babies. Last year, the Division staff were able to make 22,578 visits. Of these, 1,390 were to pre-natals, 4,985 to infants, 11,632 to pre-schools and 3,604 to school children. Seventeen thousand, five hundred and ninety school children were inspected; the hearing of 7,347 children was tested with the audiometer, and 274 of these were found to have defective hearing. These visits do not include the many trips made to physicians, hospitals, welfare organizations and others in the interests of these groups, to arrange for treatments and relief.

Through the office of the Division, plans are made for programs for nursing services; nurses are secured for the Division staff and other organizations desiring this assistance; lectures and radio talks are prepared and

given; conferences for public health nurses are arranged; motion pictures for visualizing the work are shown; material for classes for school children in infant care is prepared, test papers corrected and diplomas issued; literature and pre-natal letters sent out. Last year, over two thousand of these pre-natal letters were sent upon the request of expectant mothers, nurses and physicians.

To bring further to the attention of the people of Maine the need for work with children, the Maine Child Health Council was organized in 1928. This Council is made up of delegates from all state-wide organizations doing work with children. Through these delegates, the plans of the work are taken back to their respective organizations.

The Council has sponsored, for the past three years, a two-day Child Health Institute at the University of Maine, at Orono, during Farm and Home Week. Here the program covers special phases of child health and development. These Institutes are well attended. More than two hundred have been present each year.

The office has, since its organization, endeavored to have all tuberculosis patients living in territories covered by a public health nurse visited by her to encourage the patient, to help in getting the doctor's orders carried out, and to urge medical care and the examination of contact cases when the patient is not under the supervision of a physician.

Last year, it was possible to have visits made to one hundred and sixty-seven patients by nurses.

May Day, Child Health Day, is generally observed throughout the state, and as state chairman, the Division Director prepares programs for such organizations as desire them, arranges for speakers, plans the loan and projection of motion pictures, and other details involved in making the day a starting point or an accounting day for child health work. Last year, over two hundred communities made requests for assistance with their programs.

Last fall, the Maine White House Conference was called at Augusta by Governor Gardiner, with over seven hundred in attendance. The details of the Conference were handled largely by this Division.

The Child Health Institute to be held this year at the University of Maine will further promote the work recommended at the Conference.

As it may be seen, the work of the Division is varied, of intense interest and of wide scope, with the ultimate aim of helping and promoting greater interest in and securing better care for children, and the results of the work are beginning to be apparent.

State Mortality and Morbidity Reports

DISEASES	Cases Reported in Four Weeks Ending Feb. 27, 1932	Deaths in Jan., 1932
Chicken pox,	164	0
Diphtheria,	18	0
Gonococcus infection,	61	1
Influenza,	165	27
Measles,	2,336	14
German measles,	136	0
Meningitis, cerebrospinal,	0	1
Mumps,	77	0
Pellagra,	1	0
Bronchopneumonia,	157	37
Lobar and plain pneumonia,		45
Scarlet fever,	108	1
Poliomyelitis,	0	1
Pulmonary tuberculosis,	35	25
Other forms,		10
Syphilis,	19	4
Typhoid,	5	1
Whooping cough,	143	1
Auto fatalities,		1

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Brunswick, 1862-1932**

Our widely known friend in medicine, for many a year, Dr. Andrews, of Brunswick, died at his home February 24, 1932, after a disease of the heart existing for some time, but terminating at last in a single day.

The son of Alfred and Eunice Hersey Andrews, he was born in North Paris, July 30, 1862, and was fitted for college at Bridgton Academy. He taught school at times during his college education, and after obtaining his academical degree he was graduated from the Bowdoin Medical School in 1894. He practiced for a while at West Sumner, until he settled in Brunswick in 1903, where he has just died.

He served as health officer on the school board at Brunswick for several years and was a very useful medical adviser during two years of influenza epidemics. He served on the school board for several years, was a member of the U. S. Pension Examining Board, also a very useful member of the State Legislature. Although he was a Dem-

ocrat, many voters of the opposite party voted for him in his various campaigns. During his career he took special interest in politics and held minor town offices in Paris. During his life in Sumner he was of great service to the town in obtaining for the education of the children three new school-houses. He was also interested in the Oxford County Telephone Company, and was an organizer and director of the Rumford National Bank, resigning from these offices after finally establishing his residence in Brunswick.

As can be seen from the appended portrait, he was a man whom one could not help liking personally, and his charming personality drew and held to him always a large and devoted clientage.

Dr. Andrews is survived by his widow, Mrs. Annie Burgess, two daughters, and also a brother, the well-known Lewiston physician, Dr. S. M. Andrews. J. A. S.

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County News and Notes Cumberland

The Portland Medical Club met at the Columbia Hotel on Tuesday evening, March 1, 1932, at 8.00 o'clock. Speaker, Dr. W. R. McAdams. Subject, "Diagnosis of the Red Eye." There was a short talk by Dr. Eugene H. Drake on "Opportunities for Medical Post-Graduate Study Abroad."

DR. E. S. HALL,
Secretary.

At a meeting of the Brunswick Medical Club the following resolution was adopted.

WHEREAS death has taken from us two members of our local fraternity, be it

Resolved, That in the deaths of Dr. Henri Lambert and Dr. Eugene H. Andrews the profession has lost two valued members, and the community has sustained a loss not soon to be retrieved. Dr. Lambert had endeared himself to a large clientele among the French-speaking citizens of the town, where his genial presence will long be greatly missed, and Dr. Andrews, equally beloved by a large circle of patients and friends, will be equally missed.

Voted, That a copy of this resolution be transmitted to the families of Dr. Lambert and Dr. Andrews, and to the JOURNAL of the Maine Medical Association.

CHARLES H. CUMSTON,
ELBRIDGE G. A. STETSON,
EARLE RICHARDSON,
Committee.

Penobscot

The Penobscot County Medical Society met Tuesday, March 15, 1932.

At the Eastern Maine General Hospital, at 4.30 P. M., a clinic was held.

Mastoiditis with Cerebral Complications,

Dr. J. L. Johnson

Empyema (twelve years' standing),

Drs. Sanger and Goodwin

Diabetes with Hyperthyroidism, Dr. H. C. Knowlton
Probable Aneurysm, Dr. H. C. Knowlton

At the Bangor House, at 6.30 P. M., dinner and business meeting.

Dr. C. H. Lawrence, of Massachusetts General Hospital, spoke on "Some Aspects of Endocrinology."

Notices

Dr. Adam P. Leighton, Jr., desires to announce to the profession the purchase and personal ownership of one hundred and ten milligrams of radium, to be used for gynecological purposes only, in conjunction with his practice.

The treatment of cancer and benign hemorrhage of the female reproductive organs will be undertaken according to the technic of Professor Stefan Simon, of Vienna.

Office: 192 State Street, Portland, Me.

New Orleans is the city chosen for the 1932 meeting of the American Medical Association, and for the Eighteenth Annual Tournament of the American Medical Golfing Association. The dates are May 9th to 13th inclusive.

If you are planning to attend this meeting, make your hotel reservations at once by writing Dr. Emmett L. Irwin, chairman of the Sub-committee on Hotels, Box 1460, New Orleans, Louisiana.

The Thomas W. Salmon Memorial Lectures will be delivered by Dr. Adolf Meyer, Professor of Psychiatry, Johns Hopkins University, and Director of the Henry Phipps Psychiatric Clinic, Baltimore, on April 8, 15 and 22, at 8.30 P. M., at the New York Academy of Medicine, 2 East 103d Street, New York City.

IAGO GALDSTON, M. D.,
Executive Secretary.

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Mead Johnson & Company announces an award of \$15,000 to be given to the investigator or group of investigators producing the most conclusive research on the vitamin A requirements of human beings.

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COMMITTEE ON AWARD

The Committee on Award will consist of eminent authorities who are not connected with Mead Johnson & Company, the names of whom will be announced later.

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For other details of the Mead Johnson Vitamin A Clinical Research Award, see special announcement, pages 14 and 15, in *Journal of the A. M. A.*, January 30, 1932.

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One of a series of messages in the *Saturday Evening Post*, the *Literary Digest* and other magazines, setting forth some of the accomplishments of Medical Science in the diagnosis, treatment, and prevention of disease.

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he knows about you the more he can help you.

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4. Disease germs are everywhere. You can't avoid contact with them. But your doctor can take certain steps to protect you against contagious diseases.

5. You may have a number of fears about your physical health which are real to you, but which your physician may prove actually baseless. Many of us make ourselves ill by useless worry.

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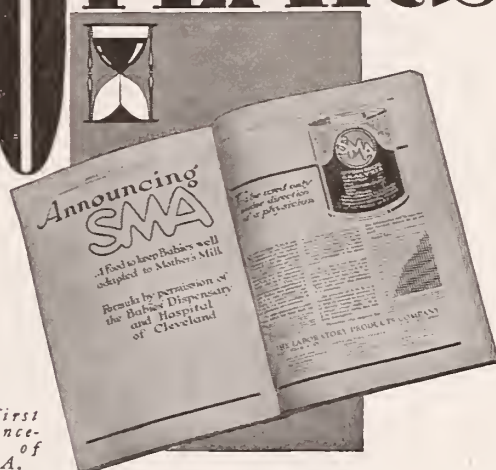
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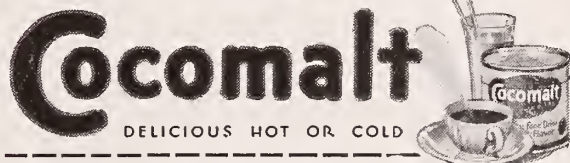
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Maine Medical Journal

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No. 4

Editorial

Cancer Can Be Cured

Recently in Boston, under the auspices of the State Department of Health and the Massachusetts State Medical Association, a clinic was held in which there were observed one hundred and fifty individuals cured of cancer. All had remained free from evidence of the disease for a period of five years and longer. Positive diagnosis had been made in all these cases by histologic examination. This group represented all types of cancer. From analysis of the reports and figures supplied by the larger clinics and hospitals treating cancer, it is fair to state that at least 30% of their cases are being cured to-day.

While it is without doubt true that we are to-day as far as ever from having established the etiology of cancer, very decided advance has been made in recent years in our methods of attack and study, and real progress made in effecting some degree of control of this dread disease. Students are no longer wasting so much time as formerly in vain efforts to discover some one causative agent. A recognition that cancer may well be the expression of the combined effect of various conditioned circumstances broadens the field of research, renders the problem more complex, it is true, but paves the way for and should compel real cooperation between the biochemist, the bacteriologist, histologist and pathologist, some of whom are beginning to see that a pooling of their

investigating effort and a more painstaking sifting of *all* the evidence is essential to progress and a final solution.

In the meantime, early diagnosis, coupled with a more intelligent application of surgery, radium and the X-ray, do to-day effect the cure of cancer in many individual cases. A very real triumph, for the greatest therapeutic agent in combating any evil is the confidence bred in the mind of the sufferer that his case is not a hopeless one. Cancer will one day be added to the long list of preventable diseases. To-day it is our duty to spread the knowledge that cancer is no longer synonymous with death, that it can often be cured, and always favorably influenced to the benefit and comfort of the afflicted. How may this best be done?

This truth that "cancer is not hopeless," which we can now confidently state when once generally appreciated, is a bigger boon, a far greater contribution to the happiness and welfare of mankind than the cure of thousands of individual cases of cancer. "Mental suffering is far more malignant than physical pain." Fear is still the arch fiend and worst enemy of man.

It is not by dwelling on the horrors of war that we shall attain peace nor by pictur-

ing to the public the frightfulness of disease that we shall secure health or "peace" of body—such measures foster panic and so defeat the desired end.

We recommend a careful reading of Dr. Leighton's paper in this issue.

Hospitals as Health Educators

The JOURNAL is convinced that a great opportunity in our hospitals and clinics to spread the gospel of the truth about health and disease is being lost. Systematic courses of instruction to convalescents in our hospitals and clinics upon how to maintain health and avoid disease would find audiences inclined to listen and vastly more receptive than those which the press or radio reach. Few who are well and have had no intimate experience with disease will listen to advantage or profit much from health talks. The hospital patient and a multitude of his friends are vitally interested in his health. These will listen, and we should give them on every occasion more facts and fewer fables. It might be well to use our hospitals as centers for the instruction of the sick in matters of health, as well as schools for the instruction of the nurse and interne. After all, the *raison d'être* of the hospital is the care and welfare of the sick, not the education of the doctor and nurse. *The modern training school for nurses, in its present form and without independent resources,*

has become an incubus from which many hospitals must be relieved or die.

The Baer Maggot Treatment

The Baer maggot treatment of osteomyelitis (that most intractable and dangerous affection of bone) is receiving well-deserved attention in the medical world to-day.

Any effectual treatment of osteomyelitis until now has rested entirely upon the prompt and often very radical application of surgery and a variety of antiseptic agents, the results being often far from satisfactory. Larvæ of the fly were first used by William S. Baer, M. D., for the treatment of chronic pyogenic and tuberculosis osteomyelitis. Dr. Baer served with the American Expeditionary Forces during the World War, and observed the absence of sepsis and the presence of healthy granulation tissue in many fly-blown wounds, this in spite of days of exposure on the battlefield without first aid, food or water. These observations led, ten years later, to the development by him of the clinical application of the larvæ of flies to the treatment of osteomyelitis. This treatment is not a substitute for surgery, but seems to be an exceedingly important and useful therapeutic adjunct.

The JOURNAL is glad to publish a timely description of this method by Dr. Hall, of Portland, enlivened and illustrated by some cases which he has treated.

Round Table Conferences

The list of the Round Table Conferences to be held at the meeting of the Maine Medical Association at Rangeley Lakes, June 16, 17 and 18, was announced in the March issue of the JOURNAL.

Since then a considerable number of applications for these conferences have been received. After studying these first applications the conferences have been grouped as to time, so that the desires of those applying first could be fulfilled. In the table below a schedule of the conferences, with their hour,

is given. Care should be exercised in filling out further applications, that there be no conflict as regards time. Each member is urged to fill out his application, giving his first and second choice of conferences. These will be filled in order of their receipt. There will also be noted that there is a further description of the several conferences.

As previously announced, Dr. Elliott Cutler, of Cleveland, and Dr. John A. Kolmer will be two of the guest speakers. The third guest speaker, who will be extremely

interesting, is Dr. D. C. Jarvis, of Barre, Vt. Dr. Jarvis has been doing a great deal of clinical research upon the effect of nutrition on the upper respiratory tract. His work is unique and the subject of growing interest in the profession. The remainder of the papers will be given by members of the Maine Medical Association. The complete program will be announced in the May issue. An added feature of the program will be a series of scientific motion pictures with sound, which will be given on Thursday evening.

Any physician having material which he desires to place in the scientific exhibit

is requested to communicate with Dr. F. T. Hill, chairman of the Program Committee, Waterville, Me. It is felt that many of the members must have interesting gross or microscopic pathological specimens, drawings or charts which would be worth exhibiting.

The management of the Rangeley Lake House has announced that doctors and their families who desire may stay over the weekend at the same reduced rates made for the convention. A number of applications for reservations have already been received and it is suggested that members make their reservations as early as possible.

CONFERENCES

THURSDAY, JUNE 16TH, 9.00 A. M.

4. Pathology. "Tumors—Their Classification and Gradation," Dr. Julius Gottlieb
Demonstrations of gross specimens and microscopic slides.
9. "History and Present Status of Cleft Palate and Harelip Surgery," Dr. Owen Smith
10. "Thoracic Surgery," Dr. G. E. Young
20. "Diabetes," Dr. J. O. Piper
Definition, etiology, pathology, diagnosis, treatment, diet, insulin, complications and their management.
22. "Tuberculosis,"
Dr. Lester Adams, together with Drs. Estes Nichols, C. B. Sylvester and Forest B. Ames
Childhood tuberculosis: Definition, diagnosis, examination of "contacts," tuberculin surveys, X-ray examinations, primary infection. Importance of childhood tuberculosis in relation to adult disease.
29. "Bedside Diagnosis of Intraabdominal Pathology," Dr. N. A. Fogg
35. Obstetrics. "Hemorrhage—Pregnancy, Labor and Puerperium," Dr. A. H. McQuillan
Etiology, diagnosis, prognosis, treatment.
37. Cancer and Radiation. "Clinical Diagnosis and Treatment of Cancer,"
Dr. Barbara Hunt, together with Drs. V. T. Lathbury and Louis Fallon
39. Ophthalmology. "External Ocular Diseases," Dr. E. E. Holt, Jr.
40. "Psychiatry in Maine," Drs. S. E. Vosburgh and C. J. Hedin
Modern trends in psychiatry. Personality in reference to the psychiatric problem. Importance of background of individual patient. Present concept of evolution of the psychoses.
42. "Tracheotomy and Intubation," Dr. G. O. Cummings
Indications and technique illustrated by lantern slides and chalk drawings. Demonstrations of instruments. Case reports.

THURSDAY, JUNE 16TH, 10.30 A. M.

1. X-ray. "Bones and Gastrointestinal Tract," Drs. F. W. Lamb and L. F. Thaxter
Interpretation of films, technique.
5. Administration—Medical Department of U. S. Army (especially arranged for Medical Officers, National Guard and Reserves), John G. Towne, Lt.-Col. M. C. Surg. Gen. State of Maine
(a) Medical Regiment. (b) Military Hospital in Contradistinction to Civil Hospital.
7. "Malignancy of the Large Intestines," Dr. W. E. Webber
Incidence, cause, diagnosis, prognosis, treatment.

12. "Surgical Conditions of the Gall Bladder," Dr. J. W. Scannell
Etiology, diagnosis, prognosis, treatment.
14. "Allergy—General Considerations," Dr. C. B. Sylvester
Allergic disease: Inherited background, acquired sensitization, lowered threshold of defense. Allergic explosion: Asthma, vasomotor rhinitis, migraine, angioneurotic edema, urticaria, dermatoses. Allergic excitants: Digestive tract—foods, other substances; by respiratory tract—vegetable dusts, animal dusts.
15. "Syphilis," Dr. B. B. Foster
Lues, in its many manifestations, must be treated more intelligently, and, in its early stages, more intensively by the general practitioner, otherwise he should not attempt to treat it at all.
21. "Pneumonia," Dr. B. L. Bryant
Etiology with type grouping. Diagnosis: Lobar, bronchopneumonia, atelectasis. Complications: Effusion, empyema, abscess. Treatment: Drugs, serums, vaccines, mechanical.
25. Pediatrics. "General Considerations of Infant Feeding," Dr. T. A. Foster
History, breast feeding, artificial feeding—cows' milk mixtures, processed milks, condensed, evaporated, dry powdered—general foods.
31. "Fractures in General Practice," Dr. Allan Woodcock
32. "Faulty Foot Conditions," Dr. R. O. Meisenback
Common foot conditions found in general practice, as acute and chronic flat foot, weak and pronated feet, rigid valgus, arthritic feet. Symptoms, cause and effect, diagnosis in doubtful cases. Indications for operations in tendon transplantation for polioparalysis, bunion, rigid valgus and hammer-toe.
34. Gynecology. "Radium and Surgery for Malignancy in the Female," Dr. A. P. Leighton
Physics of radium, indications and contraindications, application and technique, cervical and corporeal cancer, radium vs. surgery, indications for surgery, statistics.
43. "Management of Acute Otitis Media," Dr. H. P. Johnson
Etiology of acute diseases of Eustachian tube, middle ear and mastoid process. Micro-organisms and their relation to changes. Signs and symptoms. Some manifestations of otitis media in infants. Treatment in surgical and non-surgical ears.

FRIDAY, JUNE 17TH, 9.00 A. M.

3. "Spleen, with Particular Reference to Its Relation to the Blood," Dr. Mortimer Warren
Anatomy, physiology, pathology. Function in blood formation and destruction in health and disease. Classification of splenomegaly. Relation of spleen to certain blood diseases and manifestations: Pernicious anæmia, hemolytic icterus and anæmia, purpura, leukæmia, other conditions. Therapeutic splenectomy: Indications, value of.
13. Sanitation. "Water Supplies and Sewage Disposal and Their Relation to Health," Dr. E. W. Campbell
Specific examples of pollution from wells and springs. Various methods and practices of purifying water to make it safe for domestic purposes. Practical methods of sewage disposal so as not to contaminate water supplies.
19. "Nephritis," Dr. H. S. Emery
Diagnosis, renal function tests, treatment.
24. Electrocardiology. "Clinical and Electrocardiographic Studies of the Cardiac Arrhythmias," Dr. E. H. Drake
Consideration of tachycardia, bradycardia and irregularities of the pulse. Tracings of these will be shown and discussed, together with clinical manifestations. Correlation between clinical and electrocardiographic findings.
26. "Intestinal Obstruction," Dr. C. M. Robinson
Necessity of early diagnosis. What not to do. How best to treat the patient with known or suspected obstruction until surgical relief is obtained.

30. "Renal Pain—Etiology and Diagnosis," Dr. C. H. Jameson
Renal pain without clinical evidence of infection not infrequently leads to mistaken diagnosis and ill-advised operative procedure. Etiology in such cases will be discussed.
36. Obstetrics. "Use and Abuse of Forceps," Dr. R. B. Moore
Indications for use of forceps. Preparation for forceps delivery. Types of forceps in common use; their advantages and disadvantages. Varieties of forceps operations. Technique of introduction, application and traction. Dangers of improper use of forceps.
38. Ophthalmology. "Ocular Disorders in General Practice," Dr. S. J. Beach
Eye conditions seen by the family physician: Accidents, ocular disturbances of bed-ridden patients, ocular manifestations of general disease. Significance of ocular symptoms: Failure of vision, pain, redness, swelling, together with extraocular indications, like headache, anorexia, vertigo. Importance of diagnosis and treatment in glaucoma, cataract, iritis, strabismus and ocular complications of the exanthemata.
41. "Mental Disease," Dr. F. C. Tyson
Organic group: General paralysis, leptic psychosis, organic psychosis (cerebral arteriosclerosis), psychosis associated with somatic diseases, toxic and infective exhaustion disorders. Functional group: Dementia præcox (schizophrenia), manic depressive psychosis, psychoneurosis. Diagnosis, prognosis, treatment.
44. "The Maxillary Sinus," Dr. F. W. Mitchell
Maxillary sinusitis: Cause, symptoms, diagnosis, treatment—medical and surgical—adults and children. Maxillary sinus in its relation to the frontal and ethmoid sinuses, as a focus of infection. Malignancy, differential diagnosis, treatment. Analysis of results.
45. Anæsthesia. "The Anæsthetist and Various Forms of Anæsthesia," Dr. O. E. Haney
The need of an anæsthetist in the medical community and as a part of the surgical team. The seeming lack of appreciation of this fact by most medical men, and especially surgeons. Some of the newer anæsthetics and their uses.

FRIDAY, JUNE 17TH, 10.30 A. M.

2. X-ray. "Chests," Drs. John P. Goodrich and F. B. Ames
X-ray diagnosis of chest pathology.
6. "Surgery of the Hand," Dr. E. M. McCarthy
The hand as one of the most important members of the human body. Fractures involving bones of the hand, crushing injuries to the hand. Surgery of the tendons, infections, restoration of function following old injury.
8. "Atelectasis," Dr. Charles E. Bell
Lantern slides demonstration.
11. "Deep Pus in the Neck—Surgical Approach," Dr. F. T. Hill
Parapharyngeal abscess, Ludwig's angina, surgical landmarks, submaxillary approach, cadaver demonstration.
16. "Present-Day Methods of Physiotherapy and Their True Valuation in Modern Medicine," Dr. Louis Fallon
17. Immunology. "Immunization of Smallpox, Diphtheria and Scarlet Fever," Dr. W. L. Holt
Smallpox: Many unvaccinated children, objections to old methods, puncture method, etc. Diphtheria: Toxoid vs. T. A. T. Physician's duty to pre-school child. Scarlet fever: Passive immunity by antitoxin, active toxin, advised for nurses, internes, exposed children in school epidemics. Motion pictures.
18. "Constipation," Dr. Thomas J. Burrage
Personal experience with chronic constipation. Consideration of purely functional cases, ruling out constipation due to organic causes. Classification, causes, diet in relation to constipation. Treatment by means of oil enemas, bland diet and atropine. Associated chronic colitis.

23. "Treatment of Heart Disease,"
Etiological treatment, general treatment, symptomatic treatment, drug treatment.
Dr. W. J. Renwick
27. "The Traumatic Head Case—Its Treatment,"
Importance of systematized plan of treatment. Confusion arising from old terms, "con-
cussion," "contusion" and "compression." A logical arrangement in three groups, based
on intracranial pressure. A standard set of rules to follow in the treatment of all head
injuries. Operative and non-operative indications and results.
Dr. E. H. Risley
28. "Acute and Chronic Appendicitis,"
Symptomatology—subjective and objective—treatment.
Dr. W. N. Miner
33. Gynæcology. "Extra-uterine Pregnancy,"
Etiological factors, consideration of some recent methods in diagnosis, prognosis, treatment.
Dr. R. L. Reynolds

THE TABLE OF CONFERENCES

Thursday, the 16th 9.00 A. M.	Thursday, the 16th 10.30 A. M.	Friday, the 17th 9.00 A. M.	Friday, the 17th 10.30 A. M.
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9	5	13	6
10	7	19	8
20	12	24	11
22	14	26	16
29	15	30	17
35	21	36	18
37	25	38	23
39	31	41	27
40	32	44	28
42	34	45	33
	43		

(Perforation for tearing off.)

To Doctor F. T. Hill,
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(Select four)

In case any of these are filled I desire Nos.....
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Fill out and mail to Dr. F. T. Hill, Chairman of the Program Committee.



*The Treatment of Cancer in the Woman by Radium**

By ADAM P. LEIGHTON, JR., M. D.

In the campaign against cancer, all possible resources must be utilized. Until the exact cause of cancer has been determined and a specific cure has been found, our aims in this fight must be:

(1) To remove, in the individual patient, the unhealthy conditions which we have learned precede cancer, and thus prevent it.

(2) To make an early diagnosis while the disease is still manifestly local, and to educate the public to realize that early diagnosis is necessary.

(3) To treat the disease immediately, radically and thoroughly.

The early diagnosis of cancer, so far as our present-day knowledge goes, is the all-important factor in the treatment of the disease. The physician must be thorough in his examinations and utilize every method of differentiation that is available. If all symptoms are relieved which suggest cancer, some cancers will be prevented and cures made in the early stages.

My interest in radium therapy is wholly gynecologic. My radium will be used only in the treatment of cancer of the cervix and body of the uterus, and for the relief of the benign hemorrhage of the climacteric or that attendant upon uterine fibromata. I shall confine this radiological discussion to the subject of cervical and fundal cancer, with allusion to breast or rectal cancer irradiation, if you so desire, later in the evening.

Before the discovery of radium by Madame Curie, the treatment of cancer of the cervix uteri was by local destruction of the carcinomatous tissue with some form of cauterization or by surgical operation. I can well remember the old cautery at the Maine General Hospital twenty-two years ago, and the way we wielded it. I well remember the ineffectual surgery of the cervix more than two decades ago. Conscien-

tious as were those men of that date, I cannot but shudder when I realize the terrible mortality coincident with such treatment, and it is interesting to note the great strides that have been made in surgical treatment since that time, and the recent transition from surgery to irradiation of the cervical cancer.

Cancer of the cervix is *very unfavorable* for surgical operation. The exceedingly high death rate in the operation itself (often as high as 20% to 30% in the hands of the average surgeon), and the small likelihood of benefiting the patient, even if she survives the immediate effects of the operation, make it quite apparent that in this anatomical location, surgery is seldom, if ever, justified.

The only reasonable explanation for the widespread adoption in the past of surgical operation as a treatment for cancer of the uterine cervix is that in the past the pathology and general nature of the disease was not properly understood, and clinically, the bad effects of the operation came often at a long time afterwards, so that the direct connection between transplantation or "scattering" the disease, as stated by the laity, and the traumatism, due to operative manipulation, were not clearly understood even in the minds of medical men.

Favorable results after operation are often misleading—odor is removed, bleeding stopped, strength of the patient temporarily better, which tends to offer encouragement to both patient and physician, but the fact that deep implantation has occurred, the cancer cells being transplanted deep beyond any hope of possible cure, does not impress itself upon the minds of either patient or doctor. Temporary favorable results are usually only enjoyed by the women who, escaping death at the time of operation, have the good fortune to heal after it.

The error involved in the surgical treat-

*Read before the Portland Medical Club, April 5, 1932.

ment of cancer of the uterine cervix is the conception, by the surgeon, of cancer as a *solid mass* or *tumor*, without regard to the fact that part of the cancer is virtually liquid (a suspension of cancer cells in lymph around the margins of the growth); a failure to understand that *it is* transplantable, and *is spread* to great distances in the body by traumatism and manipulation. Of course, no surgical procedure can be done without traumatism, handling and manipulation.

Cases of early cancer of the cervix which are of a type that are easily and surely cured by radium are often made incurable and hopeless by surgery.

Wertheim and Schauta, with their radical operations of hysterectomy, gave such improved results over the early operative procedures that for fifteen years practically no other treatment was instituted. During all this time, radium was more or less sporadically used, and wrongly used, I might say. Some obtained results which were miraculous, and radium was heralded, as you remember, a cure, by many. No one questioned the palliative effect of radium in the inoperable cases of carcinoma of the cervix, and it has been only recently that the true value of irradiation has been ascertained by the comparison of the end results of radium therapy in the operable cases of cervical carcinoma.

I believe that the best statistics show that radiotherapy is preferable in all classes of carcinoma of the cervix, although I am certain that the radical operation may give as good results oftentimes in the early cases of well localized small cancers as radium, but at the high cost of primary mortality and morbidity. There is less primary mortality, less morbidity, less loss of time with radiotherapy than with a radical operation, and the results infinitely better. Carcinoma of the fundus is probably best treated by the combined use of radium and surgery whenever possible. Pre-operative treatment by radium for fundal cancer makes the operation easier and the results infinitely better.

It is to be deplored that many women

with cancer of the cervix are hopelessly doomed because they are submitted to obviously useless and obsolete surgical procedures, or have been improperly treated with radiotherapy. I believe that if surgery is to be used for carcinoma of the cervix, only the radical Wertheim operation is justifiable, and this requires great experience with a highly specialized technic.

Adenocarcinoma or corporeal cancer and its treatment by radium presents an interesting discussion. Where now-a-days we treat cancer of the cervix by radium, or radium and deep X-rays, in contradistinction to surgery, carcinoma of the body of the uterus allows for a much different proposition. Cancer of the uterine body occurs much less frequently than carcinoma of the cervix (about 10% of the cases) and it has not the same high mortality. The diagnosis is less certain on account of the many other conditions which may simulate it, and because it is not visible to the eye. A difference of opinion exists to-day among surgeons and surgeon-gynecologists as to whether adenocarcinoma should be considered a radium disease wholly or a surgical disease. Some take the stand that radium alone should be used and no surgery elected; others believe in hysterectomy and later irradiation if need be, while many believe in pre-operative irradiation with subsequent hysterectomy. In Vienna, in both clinics they were rather emphatic that surgery was contraindicated. Radium was sufficient. From what I have observed and read of statistics, I believe that radium is the treatment to be instituted first, and one may elect hysterectomy later. The condition of the patient is improved and the chance for metastasis through surgical trauma is rendered negligible. Where surgery is first employed, later radium therapy is rendered difficult of application. There is no doubt that irradiation is an invaluable adjunct to operative procedures in the treatment of carcinoma of the fundus of the uterus. I admit that if the size and age of the growth and the patient's general health keep the

surgical risk within normal limits, that surgery, theoretically at least, is the treatment of choice. Operation discloses the true extent of the disease, whereas radium is handicapped because the application must be made in an invisible field. I say, however, radium first, and then surgical removal of the organ later if so desired. If this order is reversed, you spoil the possibilities of radium for the most part.

I have mentioned briefly and extemporaneously to-night the physics of radium. What is its clinical effect on the tissues? In general terms, the action of radium is to produce cellular death, but this effect varies within wide limits with the amount of radium used, the duration of exposure and the type of tissue involved. The destructive effect is most marked in the case of embryonic cells, as in malignant growth, or in the Graafian follicles of the ovary; it is less marked in the more mature cells of a benign neoplasm, and least marked in the case of the adult type of cells forming the parenchyma of organs. The more malignant a tumor, the more susceptible it is to the destructive action of radium.

The exact manner in which radium produces its lethal effect is not yet known. Whether direct action on the tumor cells or an indirect action through the production of thrombosis; whether ionization, decomposition of lecithin causing cellular degeneration, I know not. I do believe that its action in producing thrombosis is a contributory factor, at least. We know that it has a threefold action in malignant disease. It affects (1) the cancer cells (2) the connective tissue and (3) the blood and lymph vessels. Vacuolization of the protoplasm of the cancer cell, followed by loss of the nuclei, phagocytosis, absorption and replacement by a homogeneous connective tissue, so contracts and affects the lymphatics and smaller blood vessels that the growth is actually starved.

The varieties of technic which have been used since radium therapy was instituted, and a discussion of each, is decidedly out of

order. Suffice it to say, that there are two entirely different schools of thought in regard to the method of treatment. In one, the opinion is that it is best to give large doses in a short space of time, preferably in one or two sittings. The other is that it is preferable to give small doses over a fairly long period of time. It has been my privilege to work with an exponent of the former technic and later to witness the application of radium in the Foundation Curie, Professor Regaud's Clinic in Paris, where they strictly adhere to the second type of routine. In Vienna, where what little knowledge I possess of this therapy was gained, Prof. Simon administered a good-sized dosage in repeated intervals, usually from fourteen to twenty hours, at a sitting. His results over the period of the last five years have been uniformly good, notwithstanding the general belief that it is poor business to build up tissue resistance by repeated dosage. I soon realized why he followed this plan, for I noticed that when he could obtain the radium from the Institute for a longer period of time than that usually allotted, he made use of it to the limit. I must say that after visiting Prof. Regaud's Clinic in Paris and reviewing his results and statistics, it was brought home to me rather forcibly that Prof. Regaud's technic and reasoning were assuredly the more practical. In Simon's clinic in Vienna all cases were treated by direct application of radium, while in Paris all treatment is through the medium of radium emanation.

There are certain contraindications to the gynæcological use of radium which, in general, should be heeded. A thorough preliminary examination of the patient's condition is necessary. To epitomize these contraindications, I would say that a cachetic or emaciated patient is a poor subject—more harm than good may be done. The general condition should be improved, if it is possible of improvement, and radium withheld until such a time. Anæmia from repeated hemorrhages or due to the toxic absorption from a foul cervix should be looked for. A

red cell count under three million or a hemoglobin index of forty or under precludes the use of radium, as it may increase the anæmia. Pyometra, jaundice and pyelonephritis, due to obstruction from extension of the growth, should be investigated. The presence of any inflammatory pelvic lesion prohibits the application of radium, and it should not be used until this inflammation is cleared up on account of the risk of setting up peritonitis. Involvement of the rectum or bladder, with the usual sequelæ of bleeding and tenesmus, contraindicates the use of radium, as it may hasten fistulæ formation.

In any application of radium in cases of cervical cancer it is necessary to group the cancer invasion. According to the diagrams which I have roughly prepared, you will see what is meant by Groups I, II, III and IV. Many speak of the groups of cancer as of *low malignancy*, *medium malignancy* and *high malignancy* on a basis of differentiation of the tumor cells, and others speak of the different types as *early*, *borderline* and *inoperable*.

In Group I, *operable* cancer is in its earliest stage. It is confined to the cervix. Usually there is no hemorrhage, no pain or discharge. Suspicious lesions call for biopsy. The cancer in Group I is really a microscopic disease.

In Group II, *borderline*, the disease has obviously advanced, but not beyond the confines of the cervix proper. Disintegration has begun. It bleeds freely. It is friable and gives off a bloody, watery, offensive discharge. These are the two groups where in radium or hysterectomy should effect a permanent cure. These are the groups about which no doubt will center the discussion tonight—the surgeon first, last and always versus the surgeon-radiologist. Curiously enough, the pendulum has swung almost completely towards the side of radium therapy, as regards the treatment of cancer of the cervix, these past three years.

Group III—advanced, *inoperable*—shows wide invasion of the cervix and evident entrance of the growth to the parametrium.

It is no longer truly an *operable* lesion. Radium is the only medium of relief except in many cases where X-rays, in addition, plays an important part.

Group IV is the most advanced stage, and the best we can hope is to stay the progress of the disease and relieve distressing symptoms. This can be done with radium.

Regarding the statistics as made public by the best-known authorities, I would state that Prof. Regaud, of the University of Paris, shows 81% cures in Group I cases (this means 5-year cures), 43% Group II cases and 13% Groups III and IV. These figures are all the more remarkable when one recalls that 90% of the patients were inoperable when treatment was begun. This treatment was carried out with an average small amount of radium, about 55 mg. per patient. These results are the best published from a large radiological clinic. Representing, as it does, one of Europe's foremost cancer clinics, it carries great weight, and the methods used are worthy of careful study. Heyman reports 35% (5-year cures) in the first two groups and 16.3% in Groups III and IV. Ward, of New York, gives 53% (5-year cures) in the first two groups and 23.1% in all groups. Mayo Brothers give 21.8% and 66.6%. Schmitz, of Chicago, reports 17.5% and 53.5%. Rhode Island Hospital (Pitts and Waterman), 17.4% and 58%. Simon, of Vienna, told me his statistics would show 30% cures in all groups and between 60% and 70% in the first two groups.

The preliminary treatment of the patient previous to the technic of application is that which would be accorded a woman upon whom dilating and curetting would be done. The bowels should be especially evacuated and the bladder empty. Many cases may have radium introduced according to this routine and no anæsthetic used. In Europe, in the clinics, I never saw an anæsthetic user. You all know what the clinic patient in European countries expects and receives, when it comes to the consideration of her comfort during examination and operation. American women, and especially private

patients, demand gas and oxygen or other light anæsthesia, and I find that I can do my work easier thereby. Radium therapy is, of course, adaptable to hospital use for this reason. A general anæsthetic is objectionable, as it reduces the patient's resistance to cancer. Again it causes vomiting and precludes the safe use of radium application coincident with anæsthesia, as it might be easily displaced.

The patient is placed in the lithotomy position and a large bi-valved speculum is inserted and the vaginal cavity thoroughly cleansed. A 3% alcoholic solution of picric acid, by dipping a cotton-covered probe in this solution and passing it through the os into the cervical canal, or absolute alcohol is used by many. The cervical canal is dilated very gently and slowly in order to introduce the uterine tandem tube applicator. This applicator is especially prepared to treat the case in hand, being designed to fill the entire uterine canal. The greatest care must be exercised in order not to traumatize the carcinomatous cervix, dilation being secured by means of Hegar metal dilators of graduated size. If this is done cautiously, discomfort or hemorrhage is usually avoided. The conventional Goodell dilator should *not* be used; it is too liable to cause serious trauma. A small specimen should always be removed for microscopic study, if this has not already been done. When the canal is properly dilated, the uterine radium applicator (which should be sterilized) is readily inserted by means of a special forceps or semi-flex handle. (A little K-Y jelly placed on the end of the applicator will facilitate ready insertion.) The applicator is introduced so that the tube extends from the fundus to the external os. The radium is applied to the fornices in divers types of applicators. There are pessaries of different sizes especially constructed to allow for the loading of the radium tube, so that the position of the radium is immobilized in each fornix. There is sufficient rubber attached as a sleeve which gives focal distance and protects ureters and bladder.

The colpostat, such as I show you here, is

a very sensible arrangement also. Tubes of radium may be applied in a metal rubber tubing directly to the fornices and cervix, packed in tightly with gauze strips. This is unsafe and not good technic, because there is danger that the applicators may slip from position. It is highly important that once the radium applicator is set in position it must be immovable. One of the most important steps in the entire technic is the proper vaginal packing. About ten yards of plain, sterile, two-inch gauze should be used in thoroughly packing the anterior and posterior fornix, then the *entire vagina*. The object of the packing is to hold the radium applicators in position and to push the rectum and bladder as far away as possible from the radium, for these organs are quite sensitive to radiation. The dressing is completed with a "T" binder, and patient put to bed and instructed to keep in the recumbent position. She must not sit up, but can be somewhat elevated with pillows.

On account of the voluminous vaginal packing, urination is usually difficult. This can be overcome by leaving a retaining catheter in the bladder or catheterizing every six hours. In fifty hours the applicators should be removed and thoroughly cleansed (wash with lysol and soak five minutes in alcohol), and the patient given a cleansing enema. A vaginal douche of hot, sterile, normal salt solution should be given and the applicators reinserted at once under the strictest asepsis, and allowed to remain in position for another fifty-hour period or more, making a total of 6,000 to 7,500 milligram hours in the average case.

Upon removal of the radium at the expiration of the application, the patient is given a hot, sterile, normal salt douche and the head of the bed elevated. If the temperature is normal she may get up the following day and go home on the next. While in the hospital, and until she goes home, she should receive daily an enema and two boric acid douches. Before going home she should be instructed to take a daily boric acid douche for one month and the bowels should

be kept open by suitable diet and mineral oil. She should report for examination twice a month until the reaction of treatment has been completed, and then monthly for one year. Cervical stenosis, with possible pyometra resulting, can be avoided by the passage of the uterine sound four or five weeks after the treatment. This, however, is an infrequent complication.

As a rule, but one radium treatment as I have outlined is sufficient. If this does not control the condition, further radium would probably be of little benefit, and, in addition, there is some danger of over-radiating the normal tissues.

The question is often asked as to whether the uterus should be removed after the radium treatment. If the histologic report shows the growth of the cervix to be an adenocarcinoma (about 3%), a radical hysterectomy four to eight weeks after the treatment is perhaps advisable, for these tumors, as a rule, are rather refractive to radiation and are prone to recur. Surgery should not follow any other type of growth, unless the patient was clearly operable before the radium treatment. Even in such patients, the results from radiation alone are so satisfactory, the operative risk of radical hysterectomy (the operation to be done if any surgery is attempted) will more than equal the small percentage of supplementary chance of curing which surgery offers.

The amount of radium used in a given case depends in some degree on the extent of the lesion. I maintain that each case is an individual study and that no *definite* dose can be laid down for all cases. As Simon,

of Vienna, said, "You must know your own radium and learn what it will do." By that is meant your own particular individual set-up and its activity is learned only through personal experience, and one is guided solely through observation of its results in many cases.

In general, it may be said that the dosage for cancer of the cervix is 5,000 to 6,000 mg. hours; for body cancer (adenocarcinoma), 5,000 to 6,000 mg. hours; for benign hemorrhage of the uterus, 2,500 to 3,000 mg. hours.

It has been correctly stated that for many years women have refused operation for cancer of the cervix because they felt that it was useless because of the frequent early recurrence. The extensive successful use of radium within the last ten years should have eliminated this objection, but nevertheless the fact still remains that patients with this condition are presenting themselves too late for a cure to be accomplished. Moreover, the attempt to treat these advanced cases with radium has had a tendency to bring this method into disrepute, because the pain with which the late stages of the disease are attended is believed by the laity to be due to a radium burn. For this reason many patients refuse radium treatment. If nothing else, may I lay emphasis on the fact that *early* diagnosis and *early* radium treatment is of primary importance. If radium is to be used late in the disease, and *after all else* has failed, one must expect unfair criticism and poor results. Radium is not only *palliative*, it is curative.

*Progress in Spinal Anesthesia**

By WALTER E. TOBIE, M. D., General Surgeon, Maine Eye and Ear Infirmary

Since reporting my cases of spinal anesthesia before this society some months ago, I have simplified and improved my technique. Spinal anesthesia has been the subject of different theories, and its induction, as de-

scribed, is somewhat complicated. The methods used fall broadly into two classes. One employs the introduction of a fluid of different specific gravity from the spinal fluid, which depends upon gravity for the extent

* Read before the Cumberland County Medical Society, April 1, 1932.

of its contact; the other is based on direct mixture of the anesthetic substance with the spinal fluid, and diffusion, influenced by the amount of fluid withdrawn, the amount of novocaine employed, and to some extent the force of introduction.

My cases previously reported have been those of the first named method, with spino-caine as the agent. Some months ago I adopted the second method, using powdered novocaine dissolved in the spinal fluid in ampoules. The improvement in results has been so marked that I desire to amend my previous statements and class it as a reliable and satisfactory form of anesthesia.

My entire number of spinal anesthetics is at present two hundred and twenty-nine. Since changing methods, I have had eighty-seven cases of great variety. The anesthesia has been unsatisfactory in one only, and the failure in this case is explained by the accidental puncture of a blood vessel and a mixture of blood with the spinal fluid. Not only has the present method given more uniform results as regards the completeness of anesthesia, but it has been quicker in onset, as lasting or more lasting in effect, and practically free from disturbing post-operative sequelæ.

The method in detail is as follows:

The night before operation two capsules of Nembutal are given. Two capsules are also given three-quarters of an hour before the time of operation and a No. 1 H. M. C. hypodermic one hour before the operation. The puncture is made with the patient in the lateral position, either right or left as is most convenient for the operation intended. One ampoule of novocaine ephedrin (Metz) is injected in the skin over the second, third or fourth lumbar interspace, and in the tissues beneath leading down to and into the interspinous ligament. A Sise introducer is next inserted and puncture of the spinal canal effected through it by means of the McGregor gold needle. The spinal fluid is then allowed to drop into the ampoule of novocaine, drawing off usually forty or fifty drops, and the needle is closed with its wire. The solution is effected by means of another needle attached to the syringe drawing from and injecting into the ampoule once or twice.

The extra needle is then removed, the syringe applied to the needle in the spinal canal, and the whole amount injected in an ordinary manner, neither slowly nor forcibly. The so-called Barbotage or mixture is seldom employed. The wire is inserted, needle and introducer removed, and the patient placed in position for the operation.

No effort is made to control the height of anesthesia by the force of the injection, but the amount of novocaine employed has an important influence and is varied accordingly. The smallest amount used has been 100 milligrams. This is effective in some cases of low anesthesia, as of the limbs, rectum or vagina, but usually for the simpler forms of surgery. A more common strength is 120 milligrams, and this has proved effective in many pelvic operations, including complete hysterectomy, although for the last named 150 milligrams is perhaps better. For operations of a higher level, extending to and above the umbilicus, 150 milligrams is used, and this has answered for gall bladder operations, although here 200 milligrams is more effective.

Anesthesia is very prompt following this injection. It has been found that the patient is anesthetised by the time she is placed in position, surface sterilized, and the sheets and towels adjusted. There is no occasion for testing the anesthesia by pinching the skin. If induced as described it has shown itself to be effective at the levels named. The anesthesia continues for an hour, sometimes a little longer.

As regards the position of the patient we have employed exclusively the Trendelenburg position of varying degrees. The extent and duration of anesthesia is probably not dependent upon posture but the safety of the patient is believed to be assured by this position, which is adopted shortly after the injection, maintained during the operation, and for at least six hours afterward. It is believed that this position is the one great element of safety in spinal anesthesia, and it is impressed on all having to do with the patient and the operation that this position must be maintained. The patient's head must not be raised.

Post-operative disturbances are infrequent

and exceedingly mild in character. There is an absence of nausea, vomiting, distention and intestinal paresis. On the day of operation the patient is able to drink liquids freely and in considerable amounts. Occasionally, there is nausea on the second day, but by this time the patient has taken in a large amount of fluid and kidney function is properly established. There may be pain and soreness from the operation, but not the distressing gas pains of general anesthesia. Kidney complications are absent. Lung complications are infrequent. They can be caused only by taking a cold in the ordinary sense through body exposure—always a possibility—or from emboli. In my series there have been no such complications. Post-operative headache is exceedingly rare with the technique described. Severe back pain has not occurred, though there is an occasional soreness, slight in character. The whole post-operative history is in every way superior to that of general anesthesia, and convalescence is hastened.

Regarding the character of the cases in which we have employed spinal anesthesia, I may state they have included those of the more difficult character. I first employed it wherever possible in bad risks, but have extended its use of late to milder cases. It must be evident that if it is safe for a bad risk, it is safe for a case of ordinary severity. There has been no attempt made to exploit it unduly. It has not been used in the few cases where the patient expressed objections to its use. It has not been used in cases where my

clients in the medical profession preferred general anesthesia, and it has not been used in many cases of mild character where general anesthesia has been more convenient. It has not been used in the very young, but has been used quite regularly in those of advanced age with the best of results.

With this fair basis for its use I find that I have, since adopting the method described, used spinal anesthesia in approximately 31% of my cases as against 12% in the series previously described.

As regards the kind of operations in this series there have been hysterectomies, complete and supravaginal, cholecystectomies, cholecystostomies, cesarean sections, hernias, appendectomies, extrauterine pregnancies, kidney operations, one splenectomy, a variety of pelvic operations, abdominal and vaginal, and several amputations.

Notwithstanding the satisfactory results obtained, spinal anesthesia is hardly suitable for general adoption. It requires experience in technique, and team work of a high order on the part of all assistants and operating room attendants. The time limitation is also important. One hour is about the duration of anesthesia. If an operator, however skillful, careful and successful, spends two hours on a major operation, he will do better with general anesthesia.

My conclusions are as follows:

Properly conducted spinal anesthesia is safe, pleasant, and reliable.

The Use of Maggots in the Treatment of Wounds

By E. S. HALL, M. D., Portland, Maine

Probably the most outstanding development in medical science since the discovery of salvarsan by Erlich in 1910 is the use of maggots in osteomyelitis by the late Dr. William S. Baer at the Children's Hospital in Baltimore.

How Dr. Baer came to use maggots is best told by himself. His story is as follows:

*"Ever since the days of Pasteur and Lord

Lister surgery has been basing its antiseptic and aseptic treatment upon their discoveries, and we have almost come to the belief that the antiseptic and aseptic techniques were purely on a chemical basis. During the late World War an observation which I made among the wounded soldiers led me to believe that the prevention of an infection, and the curing of an infection, could be brought about

*Used by permission of Dr. George E. Bennett from an article printed in *The Journal of Bone and Joint Surgery*, July, 1931.

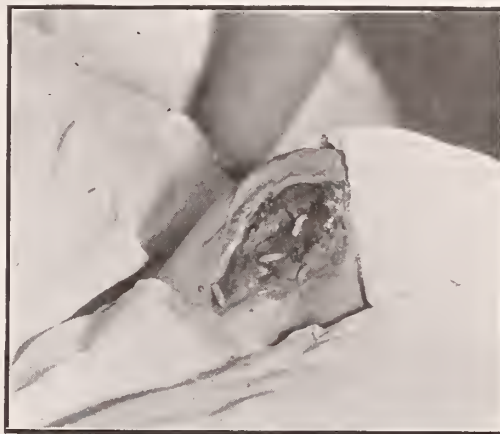
by means other than chemical. At a certain battle during 1917, two soldiers with com-



Full-grown maggots seven days old.

pound fractures of the femur and large flesh wounds of the abdomen and scrotum were brought into the hospital. These men had been wounded during an engagement and in such a part of the country, hidden by brush, that when the wounded of that battle were picked up they were overlooked. For seven days they lay on the battlefield without water, without food, and exposed to the weather and all the insects which were about that region. On their arrival at the hospital I found that they had no fever and that there was no evidence of septicæmia or blood poisoning. Indeed, their condition was remarkably good, and if it had not been for their starvation and thirst, we would have said they were in excellent condition. When I noticed the extent of the wounds, of the thigh particularly, I could not but marvel at the good constitutional condition of the patients. At that time the mortality of compound fractures of the femur was about 75% to 80%, even when the wounded had the best of medical and surgical care that the Army and Navy could provide. Later, of course, the mortality was reduced as the splinting improved in the advance area, and when finally the splinting was made to a compound fracture of this nature where the men fell, the mortality was cut down to about 25%. Here, however, were two men in the earlier part of our en-

gagement in the War, when the mortality of compound fractures of the femur was high, who, to all intents and purposes, were constitutionally well. This unusual fact quickly



Maggots in wound of foot.

attracted my attention. I could not understand how a man who had lain on the ground for seven days with a compound fracture of the femur, without food and water, should be free of fever and of evidences of sepsis. On removing the clothing from the wounded part, much was my surprise to see the wound filled with thousands and thousands of maggots, apparently those of the blowfly. These maggots simply swarmed and filled the entire wounded area. The sight was very disgusting, and measures were taken hurriedly to wash out these abominable looking creatures. Then the wounds were irrigated with normal salt solution and the most remarkable picture was presented in the character of the wound which was exposed. Instead of having a wound filled with pus, as one would have expected, due to the degeneration of devitalized tissue and to the presence of the numerous types of bacteria, these wounds were filled with the most beautiful pink granulation tissue that one could imagine. There was practically no bare bone to be seen and the internal structure of the wounded bone, as well as the surrounding parts, was entirely covered with the pink, rosy granulation tissue which filled the wound. Bacterial cultures were made, and while one found a few staphylococci and streptococci still remaining, they were very few in number and not sufficient at that time to cause a pus forma-

tion. These patients went on to healing, notwithstanding the fact that we removed their friends which had been doing such noble work.

The character of these wounds made such an impression upon me that I could not help but revolve the question in my mind for the next ten years, until I finally decided to put the observations made on the battlefield into practical use in civil surgery. There have been notes made by other military surgeons, notably, Larrey, Millingen, Keen, Zacharias, of the apparently harmless and perhaps beneficial effect of blowfly infestation of war wounds, but no mention is to be found of any experimental or voluntary use of these scav-

enged in their cure by the means usually employed, I thought it was time to put into active use the observation that I had made on the battlefield. We, therefore, obtained the maggots from the blowfly from our immediate neighborhood, and, without sterilization of the fly or maggot, we loaded the wound up with these maggots and proceeded to watch the results. It must be remembered that at this time no attempt was made to sterilize the



Tuberculosis of arm with cage applied.

engers in wound treatment in times of peace. All of us have had many cases of osteomyelitis, both in children and in adults, which have failed to heal under the antiseptic treatments which have been used from time to time. Whether treated by irrigation with mild bichloride solution, or the packing with iodoform gauze, or the use of Dakin solution, or the use of secondary closure after a complete toilet of the wound, or immediate closure as recommended by Halsted, these cases have formerly recurred and recurred.

In September, 1928, there were four cases of children that came into the hospital, each one of whom had been operated upon three or four times and treatment had covered a period of from one to five years. Being baff-



(Bone (thigh) before maggots were applied.

maggot or the egg. We were copying, as we thought, the same conditions under which the maggots had performed their work on the battlefield. First, a thorough operation was performed, with removal of all dead tissue, sequestra, devitalized muscle, fascial tags—a complete macroscopic housecleaning of the region performed surgically. Nothing was used upon the skin of the patient except some

slight scrubbing with normal salt solution, and no antiseptic whatsoever was brought in the neighborhood of the wound. The operation was done with the bare hands, washed only in water, and while no gloves were used, no iodine or any other chemical preparation was applied to the wound itself before operation. The idea was that if the wounds healed up by means of the introduction of the maggot, the maggot alone would be respon-



[Bone (thigh) after five weeks of maggot treatment.
(Treated at home.)

sible for the cure and no chemical agent could be said to have had anything to do with the result; and, if the wound healed, the maggot would not be injured or its activity decreased by bringing it in contact with any chemical substance. I realized the days on the battlefields and in the war hospitals could not be entirely reproduced, in that while on the battlefield the action of the maggot would be to prevent infection, in the cases now under treatment the action would be to cure infec-

tion. Nevertheless, at the end of about six weeks the wounds had entirely healed, not only in the deeper structures but even as to the skin."

Many difficulties were encountered by Dr. Baer when he began his work. First, was an inadequate supply of maggots, due to the fact that the common house fly leaves Baltimore about the middle of October and does not return until the following May. During this period, he was unable to carry on any further work with maggots, but the next spring he went at it with renewed vigor. He finally overcame this difficulty by raising flies in his own laboratory. His second difficulty was to eliminate infections which the maggots themselves carry, namely, tetanus and gas gangrene. Several cases of tetanus developed, but were controlled by antitoxin. The same was true of one or two cases of gas gangrene. Because of this it was quite apparent that in order to use maggots it would be necessary to produce them so that they would be sterile enough to insert into wounds. Many experiments were made in an effort to sterilize the maggots. The outside could be sterilized very well, but it was found that tetanus and gas gangrene bacilli were existing in the intestinal canal of the maggots. He finally found that by sterilizing the eggs with formaldehyde and raising the maggots on sterile culture media, sterile maggots could be produced.

Dr. Baer and his assistants developed the production of sterile maggots and turned the process over to the Lederle Company of Pearl River, New York, where they are now being produced by Dr. Edward F. Roberts, a Bates graduate. It is not necessary to bother with the many details in the production of sterile maggots, but it will suffice to state that the eggs are collected from raw beef, washed in sterile water containing a small amount of chlorine, and then further soaked in a 4% solution of formaldehyde for a period of three minutes. The maggots which hatch out of these eggs are sterile and are raised on sterile culture media, and after they have been tested for sterility and particularly for aerobes (bacteria which grow only in the presence of air or free oxygen) and anaerobes (bacteria which grow in the absence of air) they are packed in bottles. Each bottle con-

tain approximately one thousand maggots and they are shipped, packed next to a can of natural ice, to any and all parts of the United States. The life cycle of the common house or blowfly is as follows: The eggs hatch out into maggots in from eight to twenty-four hours. The maggots live from five to seven days and then become pupæ (a small cocoon-shaped organism about one-fourth inch long). These pupæ remain in sawdust or sand for

into the wound and the wound is covered with a wire cage. It is very necessary to have this cage fit well, for if it does not the maggots are bound to escape and the patient frequently objects, mainly because they tickle when they walk on normal skin. The cage is made by sewing very fine brass screen to strips of one-half inch sponge rubber, which are made to fit the edges of the wound



Bone (leg) before maggots were put in.



Bone (leg) after five weeks of maggots.

from five to seven days, when the adult fly emerges. Flies begin to lay eggs when they are from four to seven days old, thus is the complete cycle made.

The ordinary case of osteomyelitis is treated in the following manner: The part is washed thoroughly with sterile water, the bone is exposed and all of the diseased material is removed, the marrow cavity being widely opened. The wound is then packed with sterile gauze and left for from twenty-four to forty-eight hours or until all bleeding has stopped. The maggots are then placed

exactly. The cage is applied to the wound by folding adhesive tape so that there is a sticky side to the edge of the wound and a sticky side for the rubber to be attached to. After the cage is in place, it is strapped down along its edges with other strips of adhesive so that it is firmly applied and there is no opportunity for the maggots to escape. After the cage is applied, an ordinary electric light is placed over it in order that the maggot may be kept warm and also to drive him deeper into the wound. Maggots always seek the shade and hence get as far from the light as

possible. The maggots remain in the wound for five days and are then washed out with sterile water and a new lot inserted. A number of difficulties have arisen in treating cases. Among them has been the putting of too many maggots into a wound, with the result that in their search for food they appeared to irritate normal tissue. In all of my cases where this has happened, the condition has been corrected by removing some of the maggots. In some adults, particularly those of nervous disposition, it was found best to give them a rest period of from twenty-four to forty-eight hours between each application of maggots. By so doing, many patients continued with the treatment who otherwise would have refused treatment with maggots. Another difficulty which was overcome rather easily was in the treatment of osteomyelitis of the distal phalanx of a finger. Because of the small amount of dead material available, it was found that only a few maggots could be used and that at the end of a few hours they would have eaten all of the material available. Consequently, a new batch of maggots was inserted each morning and by so doing, a normal finger resulted. Four fingers and two thumbs have been treated by maggots, whereas two cases which refused ended

up in amputation of the infected finger. The majority of cases used on an average of five to seven batches of maggots. In some, as many as ten batches were used. Many other conditions were treated with maggots with exceptionally good results, namely, two cases of varicose ulcers, one case of carbuncle, one case of an infected hand (with no bone involvement), two very bad bed sores, and one case of a large sloughing cancer of the skin. Rapid cures resulted in most of the cases except the cancer, and that was helped materially, in that the very offensive odor was eliminated by the maggots. It has been found that many patients with osteomyelitis, who, having been ill over a long period of time, are consequently embarrassed financially and unable to afford a number of weeks in the hospital, can be treated at home. These patients are taken care of by being operated on in the hospital and then removed to their homes for the maggot treatment. Several nurses were trained to do the maggot dressing and so have been able to treat these people at home almost as well as in the hospital.

CONCLUSION

A use for the lowly maggot—one good thing at least produced by the World War.

Oscillometry in the Study of Circulatory Disturbances of the Lower Extremities

By JOHN R. HAMEL, M. D., F. A. C. P.,

Physician, Medical Service, Maine General Hospital

In many types of cases displaying circulatory disturbances of the extremities, especially the lower extremities, it is necessary to know the degree of arterial permeability, not only to establish a diagnosis and give a prognosis, but also to decide on the course of treatment and to differentiate organic obliteration from vasomotor spasm. The commonly used method of digital compressions is very unreliable, giving no information regarding the condition of the circulation between the dorsalis pedis in the foot, the posterior tibial in the ankle, the popliteal in the knee and the femoral in the groin, nor is it possible to

compare the same levels in the opposite limb.

Pachon's oscillometer, invented and developed by the French, although not extensively used in English-speaking countries, affords an accurate and safe method of studying peripheral circulation. This machine registers arterial oscillations on a dial divided arbitrarily into twenty numbered divisions. To determine the oscillometric index it is necessary to observe the amplitude of the oscillations when the cuff of the machine is attached to the limb and the plunger key pressed. For example: if the indicating needle oscillates from division 4 to division

12, the oscillometric index will be 4 subtracted from 12 or 8. According to Heitz, the oscillometric indices in the lower limb in normal people (adults) are as follows:

Thigh 4-16

Upper third of leg 3-12

Ankle 1-10

Tarsal $\frac{1}{2}$ -2

According to my own experience, the lower rather than the upper values are more commonly found. One thing that must be borne in mind is that the instrument does not register between zero deflection and absolute cessation of arterial flow or sepage, but of course a zero reading means a very inadequate circulation and combined with the degree of cyanosis, pallor, temperature, presence of ulceration or gangrene, etc., gives a good idea of the probable outcome. It must also be remembered that the oscillometer gives the sum total of arterial pulsation at a given level and does not individualize any particular vessel. In the differentiation between true arterial obliteration and vasomotor spasm due to neurocirculatory disease, Babin-ski and Heitz point out that when the affected limb is immersed in warm water (temp. 106° F.) for ten minutes, in cases of vasomotor spasm the oscillometric index is markedly increased, while in true organic occlusion there is no increase.

To quote from Cuvier: "In organic alteration of arterial permeability, the study of the oscillometric index is distinctly superior to all other methods of exploration, being at the same time more exact and less dangerous. It allows a careful determination of the actual state of the blood circulation in a limb threatened or already affected by gangrene; it indicates to the surgeon the spot where an amputation should take place, avoiding thus an incomplete operation (Guyot and Jean-neney)." The oscillometer is of especial value in the diagnosis and prognosis of cases of thromboangiitis obliterans. The following cases illustrate some of the points enumerated above.

O. N., male, aged 71, grade 4 type of diabetic, studied on the medical service of the Maine General Hospital, suffering with moist gangrene of the foot and lower two-thirds of left leg below the knee. Oscillometric indices

were as follows: in the left foot, 0; ankle, 0; below knee, 0; above knee, $\frac{3}{4}$; junction of upper and middle third of thigh, 6. On the basis of the very low indices except in the upper third of left thigh, a high amputation was advised and performed by Dr. George Tibbetts, of the Surgical Service, on Sept. 27, 1930. Thrombosis of the femoral artery was revealed at the point indicated by the oscillometer. Dr. Tibbetts felt at the time that a low amputation would have resulted in an incomplete operation or, at best, a poorly healing stump. At this time the oscillometric indices in the right leg were as follows: foot, 0; ankle, $\frac{1}{4}$; below knee, 5; above knee, 6; and although no ulceration or gangrene was present a poor prognosis was given for this limb. One year later this limb was amputated for diabetic gangrene.

R. O., male, aged 24, seen in consultation with Dr. Henry Lamb, of the Orthopedic Service of the Maine General Hospital, on Oct. 8, 1930. The history was that the patient's left leg had been injured one month before by a log rolling on it. This had badly traumatized the leg and fractured the upper end of the fibula. The toes and the distal half of the left foot showed marked evidence of dry gangrene with a clear-cut line of demarcation while the proximal half of the foot and leg were of good color. No dorsalis pedis or posterior tibial pulsation was obtained. The oscillometric readings were as follows: left foot, 0; left ankle, 0; mid leg, $\frac{1}{4}$; below knee, 4; above left knee, 5. As a basis of comparison the reading in the right foot was 1; right ankle, 3; mid leg, 3; below right knee, 4; above right knee, 5. Due to the poor readings in the left leg an amputation below the knee was advised, although if left to appearances an amputation above the ankle would have been justified. A high amputation was performed by Dr. Lamb and arterial obliteration was found at the point indicated by the oscillometer. Dr. Lamb felt the machine had been of distinct value in indicating the site of the amputation.

L. M., male, aged 29, seen in consultation with Dr. E. W. Gehring of the medical service at the Maine General Hospital, April 22, 1931. In this case both feet were abnormally red (toes and anterior third), the inner side

of the right great toe was ulcerated, as was also the inner side of the left great toe. In neither foot were there pulsations of the dorsalis pedis or posterior tibial arteries. The history was that in October, 1930, the patient noticed a cut on the inner side of the left great toe, which did not heal. Later the toes of both feet became red and burning. He was removed to a Washington hospital, and after several weeks he was discharged improved on crutches. Three weeks later he noticed a bluish appearance on the inner side of the right great toe, which ulcerated five days afterwards. There was marked pallor on raising the feet and marked erythema on putting them in a dependent position. Oscillometric index on the left foot was 0; left ankle, 3; right foot, 0; right ankle, 1½. A diagnosis of thromboangiitis obliterans was made in spite of the celtic ancestry (thromboangiitis obliterans was supposed to be exclusively a disease peculiar to young male Jews, although this idea has been given up) and a good prognosis given, based on the work of Seilbert and Samuels, who claim that if the oscillometric index in the ankle is ½ or over the outlook in thromboangiitis obliterans is good even in the presence of gangrene or ulceration. The case made excellent progress

on Buerger's exercises and later the diagnosis and prognosis was confirmed by Buerger in New York. This case indicates the value of oscillometry in the diagnosis, prognosis and management of thromboangiitis obliterans.

In conclusion, I feel that it is apparent that Pachon's oscillometer is a safe and accurate instrument for the study and management of disturbances of the circulation, especially in the lower extremities. I have found it of great practical value in diabetic and arteriosclerotic gangrene, endarteritis obliterans and thromboangiitis obliterans.

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State Bureau of Health

The Division of Communicable Diseases

By MARGARET HERRICK, Assistant to Director

The Division of Communicable Diseases of the State Bureau of Health works in a most unspectacular way, of necessity bound around by the red tape of statistics, tabulations, reports and records. It is a kind of clearing house, to which comes information from local health officers, from district health officers, from physicians, from the State Laboratory, from nurses, from lay people. The Division sorts this information and relays it where it should go.

It is a platitude of public health work that "in order to know how to prevent disease we have to know where it is." For "knowing where" disease exists we are

largely dependent on reports from the local health officers. Some of them do not report at all, others report sporadically, and many are faithful reporters. Since they get most of their information from physicians, it is clear that the amount of reporting they do depends a great deal on how well the doctors notify them of existing disease. Medical local health officers can, of course, report at least their own cases.

We are very proud of the great improvement in reporting that has occurred within the past two or three years, and we are hoping for even more thorough reporting in the future. Some doctors do not realize that

we cannot call a case (except venereal disease cases) reported unless it comes to us via the local health officer. Special efforts are constantly made to get all cases, even those already investigated by the district health officers, reported by the local health officers.

The reports received from the local health officers are tabulated and arranged, and information obtained from them is passed on in the proper channels. The district health officers receive almost daily lists of cases. The United States Public Health Service receives weekly, monthly and yearly reports of the communicable disease situation here in Maine. Another weekly report is sent out to a considerable mailing list.

Case histories and epidemiological studies are made on all typhoid fever and undulant fever cases, and on all diphtheria cases which are specially investigated. Since we keep a record of all work done at the State Laboratory on communicable disease cases (except examinations for syphilis and gonorrhœa, which are handled by the Division of Social Hygiene), we are able to maintain a close check on release cultures and feces examinations, also on examinations of material from suspected carriers. Every typhoid case is carried on our books as "incomplete" until at least three consecutive negative feces examinations have been obtained. Since about 3% of all persons having typhoid fever become carriers, the importance of this follow-up is perfectly obvious. The work on typhoid prevention is one of the most important of our projects. As a part of it, a history of every typhoid carrier found in Maine is kept up to date so far as we can do so.

About four years ago the study of undulant fever cases was taken up by the Department of Health. Since then the State Laboratory, the Division of Communicable Diseases and the district health officers have made careful investigations of every case discovered in Maine. This study also includes suspicious fever cases of obscure origin.

Special epidemiological data on infantile paralysis cases is now an important part of our work. We are particularly proud of the present fine reporting of this disease by physicians and local health officers. During the polio season we are kept busy receiving reports and giving out information. During last summer hundreds of letters were sent out as part of the campaign for preventing and controlling infantile paralysis.

Tuberculosis reporting is also improving considerably. Card records of all reported tuberculosis cases, with any admissions to and discharges from sanatoria, are filed in our Division, and all cases are referred to the Division of Public Health Nursing for follow-up. Physicians who do not report cases of tuberculosis on whom a positive sputum examination has been obtained receive a letter asking them to report. The very poor reporting of this disease has given us a weak foundation on which to base any statistical observations as to its prevalence in Maine. In 1919 and 1920, the number of reported cases actually exceeded for the first time the number of deaths. From then until 1930 more deaths from tuberculosis were recorded each year than the number of reported cases. In 1930 there were 657 cases reported to 461 deaths, and in 1931 the reporting was even better in proportion. Because the larger numbers of reported cases in 1919 and 1920 were undoubtedly due to the many ex-service men in special sanatoria, we do not feel that it is really fair to compare those years with 1930 and 1931. We believe that these last two years represent real improvement in reporting.

One feature of the activities of this Division which is perhaps most familiar to physicians is the writing of what we call "death letters." These are the form letters sent monthly about unreported deceased cases of communicable disease. They are sent for the purpose of enlisting the doctors' help in our attempt to get better reporting.

In addition to all the aforesaid routine, a constant stream of miscellaneous information, letters, reports and questionnaires comes

into the Division, and receives attention. The most ordinary note may give a clue which will open a field for investigation by one of the district health officers.

Not at all the least of the work of the Division is the constructive part taken by the Director, through his lectures to all sorts and conditions of lay people. He has lately been paying special attention to arousing interest in diphtheria immunization. He is also chiefly instrumental in preparing the weekly radio broadcasts. This educational work is, of course, more interesting to the general public than is the routine of the office. That routine goes quietly on its unspectacular way, working to reduce communicable disease in Maine.

State Mortality and Morbidity Reports

DISEASES	Cases Reported in Four Weeks Ending March 26, 1932	Deaths in Feb., 1932
Measles,	1,403	9
German measles,	269	0
Influenza,	267	45
Whooping cough,	121	0
Bronchopneumonia,	114	62
Lobar and plain pneumonia,		35
Chicken pox,	110	0
Scarlet fever,	109	0
Pulmonary tuberculosis,	58	24
Other forms,		5
Mumps,	46	0
Diphtheria,	13	2
Meningitis, cerebrospinal,	2	1
Paratyphoid,	1	0
Typhoid fever,	1	1
Undulant fever,	1	0
Auto fatalities,		4

Too Many Nurses

Training schools must curtail the steady production of more nurses or the morale of the nursing profession will break down completely. This is the opinion of the Committee on the Grading of Nursing Schools, following an analysis of early returns of the 1930 census on workers.

How serious the oversupply of graduate

nurses has become is revealed by the Grading Committee after tabulating figures for eighteen states and the District of Columbia. For this group, since the 1920 census, the total population has increased 7%, while the total number of trained nurses has increased 78%.

Although there are still areas of the country and groups of patients not properly nursed, owing to poor distribution and lack of special training, the figures for the forty-two cities studied show that the average nurse has no more than 149 days of employment in any given year, according to the present sickness rate. In Bangor, Me., she has not more than 77 days of work, and in Ottumwa, Iowa, where employment conditions are best among the cities studied, she can work not more than 201 days in the year. Rates for the other cities range between these two.

States as a whole are somewhat less oversupplied with nurses, although in New Hampshire the nurse can expect no more than 190 days of work in the year, and in Maine, Vermont, Iowa, North Dakota, South Dakota, Kansas, Delaware, Montana, Wyoming, Arizona, Nevada, Idaho and the District of Columbia there is not nearly enough nursing to be divided between the trained and untrained nurses competing for patients.

Untrained nurses are not on the increase, census figures show, but trained nurses are being turned out to terrific competition by the thousands each year. In Maine, for example, there was in 1900 one trained nurse for every 5,068 persons; in 1910, there was one for every 910; in 1920, one for every 579, and in 1930 one for every 349.

"If nursing is to avoid disaster," says Dr. May Ayres Burgess in presenting these figures in the March number of the *American Journal of Nursing*, "the steady production of more students, who become graduates, must cease. It must cease not only in the small schools, but in most of the large schools as well. Graduate nurses must be employed. If they are unemployable, they must be reëducated. The schools of nurs-

ing have produced them. They are members of the profession. Unless their morale is to break down completely, they must either be eliminated or utilized.

"This is a year of national economic distress. Hospitals are short of funds. How, then, can hospitals take care of their patients with reduced numbers of student nurses, with increased numbers of graduate nurses, and without increasing the annual budget? Let us not assume that there is no solution for this problem. Nurses who are intimately familiar with hospital administration may be able to discover new economics, new methods of organization, which will make reductions in the number of student nurses possible. Unless some solution can be found, which it is within the practical means of the hospital to adopt, nursing will continue to grow in numbers and in distress."

What the census figures will show for densely populated states, such as Massachusetts, New York, Pennsylvania, Illinois and California, no one yet knows, but nursing leaders feel grave concern. Census reports for these and other states are being analyzed by the Grading Committee as rapidly as they become available.

"Even with the overproduction of nurses, there still exists the unnursed patient," comments Miss Mary M. Roberts, R. N., editor of the *American Journal of Nursing*. "Many persons are chronically sick at home; among these are persons suffering from arthritis. New and scientific knowledge on the care of arthritis brings new opportunities in nursing. The field of psychiatric nursing, too, is hardly touched. Patients with heart disease and tuberculosis require special nursing care. Some of the unemployed nurses can well take up special training that will fit them for these types of service."

AMERICAN NURSES' ASSOCIATION,
450 Seventh Ave.,
New York City.

Necrology

Dr. George Porter Emmons, Lewiston, 1859-1932

Much lamented as a citizen, physician and specialist, Dr. Emmons, a practitioner for forty-seven years in Lewiston, died at the C. M. G. Hospital, March 27, 1932, after an illness of several weeks.

Born at Georgetown in 1859, the son of Seward and Louisa Ann Emmons, he was a distinguished scholar in the public schools, graduated with honors at Bates College in 1882, taught and studied medicine, and obtained his medical degree at the Bowdoin Medical School in 1885, post-graduate study at Manhattan Eye and Ear Hospital. He practiced at Parker Hill and Richmond, then moved to Lewiston, where he soon made for himself a handsome position in medical practice.

When the C. M. G. Hospital was opened, in 1890, all eyes were turned upon him for the superintendency of that institution. He was elected unanimously, and his reports for fourteen years proved his value to the hospital and to the community in that position. After 1904, when he resigned, he served on the staff of the hospital as ophthalmic surgeon, and maintained the reputation of a careful specialist to the end of his life.

He was not much given to the writing of surgical papers, but his reputation as an advisor and operator was well established in the community. He belonged to a large number of fraternal, charitable and civil societies. He leaves a widow, who was Abby Cunningham Emmons, of Lewiston, and a son in New York City.

County News and Notes

Cumberland

On Friday evening, April 1st, Dr. George Burgess Magrath, noted criminal investigator, addressed the Cumberland County Medical Association and friends. Many members of the local bar were present as guests. Dr. Magrath has devoted for a lifetime his unique abilities to the study of crime and criminals. His talk was illustrated, and he described in interesting detail a number of famous criminal cases.

Dr. Ernest V. Call, of Lewiston, President of our State Association, was present and spoke briefly on the status of the medical examiner in Maine. He said that steps have already been taken by our Council, with a view to improve the quality of this work in Maine and to insure the placing of medico-legal work, autopsies, the examination of tissues, etc., in the hands of those who shall be competent and whose records when filed will stand the test of the courts. He further stated that this subject will be brought up at our June meeting, being now in the hands of a committee expected to make some definite recommendations.

The Portland Medical Club held its regular meeting at the Columbia Hotel, Tuesday evening, April 5, 1932, at 8.00 o'clock. Dr. Adam P. Leighton discussed "The Treatment of Cancer in the Woman by Radium." This paper is presented in this issue of the JOURNAL.

Kennebec

The Kennebec County Medical Association held its regular meeting at the Elmwood Hotel, Waterville, Thursday, March 31st.

Dr. Arthur S. Legg spoke in the evening on the "After-Care of Infantile Paralysis." His talk was illustrated with lantern pictures, showing some of the terrible deformities the end results of this affliction when neglected. Dr. Legg's chief message was that early recognition and prompt treatment would make the development of these deformities impossible. That such cases of deformity are still found is a serious indictment of society. It is interesting to note that thirty years ago a worthy member of the Maine Medical Association wrote a paper on poliomyelitis, stressing this same message, insisting that these deformities were needless and that with proper safeguard they need not occur.

York

On the afternoon of Wednesday, April 13th, the York County Medical Society met at the Goodall Hospital, Sanford. Dr. Julius Gottlieb, of Lewiston, read a paper on "Renal Pathology," and Dr. E.

C. Higgins, of Lewiston, discussed certain "Blood Diseases," presenting some illustrative cases.

The York County Association is planning a joint summer meeting with Cumberland in June.

CHARLES W. KINGHORN,
Secretary.

News

The following members of the Association, having practiced medicine fifty years, have been recommended by the Committee on Medals as eligible for this token of their service in June:

Eben Alden, Thomaston, Long Island, 1878	Knox
Clarence A. Baker, Portland, Maine Medical School, 1882	Cumberland
John W. Bowers, Portland, University of Maryland, 1882	Cumberland
Joseph W. Gordon, Ogunquit, Dartmouth, 1879	York
George C. Upham, Biddeford, Bellevue, 1882	Aroostook
Cecil E. Wasgatt, Camden, Maine Medical School, 1882	Knox

THOMAS A. FOSTER,
for the Committee.

Augusta, March 14.—The Council of the Maine Medical Association recommend Dr. E. H. Bennett, of Lubec, for Affiliate Membership in the American Medical Association.

Books Received

Fertility and Sterility in Marriage; Their Voluntary Promotion and Limitation. By Th. H. Van De Velde, M. D., formerly Director of the Gynecological Clinic in Haarlem, Holland. Translated by F. W. Stella Browne. Published by Covici-Friede: Medical Books, New York.

This is the third volume of Dr. Van de Velde's trilogy, of which the first two volumes were *Ideal Marriage* and *Sex Hostility in Marriage*.

Body Mechanics: Education and Practice. Report of the Subcommittee on Orthopedics and Body Mechanics of the White House Conference on Child Health and Protection. The publication date was January 21, 1932. Price, \$1.50.

This is a report of a searching investigation made for the White House Conference on Child Health and Protection into the relation of body mechanics and posture to the health and well-being of children. Body mechanics is defined by the subcommittee which conducted the investigation as "the mechanical correlation of the various systems of the body

with special reference to the skeletal, muscular, and visceral systems." "There is positive evidence," the report says, "to prove that not less than two-thirds of the young children of the United States exhibit faulty body mechanics," and that this condition is likely to continue into adult life. The evidence gathered shows that improvement in body mechanics is associated with improvement in health and efficiency. An important distinction is made in the report between training in the principles of good body mechanics and training in various physical exercises. The detailed recommendations and the suggested program of corrective exercises presented here will be of value to all those concerned with the care and training of children.

Psychology and Psychiatry in Pediatrics the Problem. Report of the Subcommittee on Psychology and Psychiatry, White House Conference on Child Health and Protection. The publication date was January 23, 1932. Price, \$1.50.

This report, just published in the series of books sponsored by the White House Conference on Child Health and Protection, considers the important question, should the medical practitioner attempt to give advice when difficulties threaten the satisfactory development of personality in a child under his care? The report is a challenge to pediatricians and family doctors. Although the report does not urge all doctors to attempt to become expert in the fields of psychology and psychiatry, it states the opinion that adequate physical care of the child cannot be given without attention to whatever intellectual and emotional difficulties may be present, and concludes that when trouble arises and the individual child is in distress, a well-informed and alert physician is the obvious adviser. "Unwillingness of doctors at large to acquire the ability to deal wisely with problems involving personality of the child," says the report, "may lead to transfer of this field to formal organizations or to individuals without medical experience. Such a solution will inevitably diminish both prestige of the private practitioner of medicine and the interest of his job."

Public Health Organization. The publication date was February 5, 1932. Published by The Century Company, New York. Price, \$3.00.

This report of the Committee on Public Health Organization of the White House Conference on Child Health and Protection is based upon an extensive survey of the organizations, official and non-official, in the United States which are devoted to protecting and promoting the health of the people. The committee finds that the whole concept of public health service is changing. No longer is public health service concerned primarily with the control of communicable disease. To-day public health programs are designed actively to promote mental and physical health, as well as to prevent disease. This evolution of public health is creating a constantly increasing need for more complete and more efficient organization to safeguard and promote the health of our people. The committee considers the

administrative problems and relation of the various units of public health service, from the federal organization to the county unit, in terms of the future, and takes up other important phases of the question, such as the training of personnel, administration of child health work as a part of official health programs, and health aspects of food control.

Notices

New England Heart Association

The New England Heart Association will hold its final meetings at the Boston Medical Library, at 4.30 P. M. On May 11th, "Thyrocardiac Disease" will be discussed by Drs. Lewis Hurxthal, James H. Means, Fuller Albright and Gerald Blake. The subject of the June 1st and last meeting will be "Non-Valvular Heart Disease." Speakers: Drs. Shields Warren, Henry A. Christian, Henry Jackson and Francis W. Palfrey. For further details communicate with Howard B. Sprague, M. D., 270 Commonwealth Ave., Boston, Mass.

American Medical Golfers Play in New Orleans, May 9th

The American Medical Golfing Association will hold its Eighteenth Annual Tournament in New Orleans on Monday, May 9, 1932. The thirty-six hole match will be played over the beautiful and interesting New Orleans Country Club course, followed in the evening by the golfers' banquet and distribution of prizes. Approximately fifty trophies and prizes will be distributed to winners in the various events.

Rare Amino Acids Now Available

New information on feeding problems is expected to result from the announcement that The Research Division of S. M. A. Corporation is able to supply certain rare amino acids and other protein derivatives to research physicians and others interested in research in nutrition.

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Viosterol

USE OF VIOSTEROL DURING PREGNANCY

To the Editor:—Please advise me whether administration of irradiated ergosterol to pregnant women could cause a premature calcification of the fetal head, resulting in dystocia, with possibly damage later to the child.

M.D., Waco, Texas.

J.A.M.A.,
Dec. 19, 1931,
p. 1914

ANSWER.—There is no danger to mother or child from therapeutic doses of viosterol (irradiated ergosterol) given during pregnancy. In fact, such medication probably would be of advantage, owing to the excessive drain of calcium and phosphorus that takes place during this period. This medication is especially indicated in cases in which the intake of calcium compounds has been insufficient.

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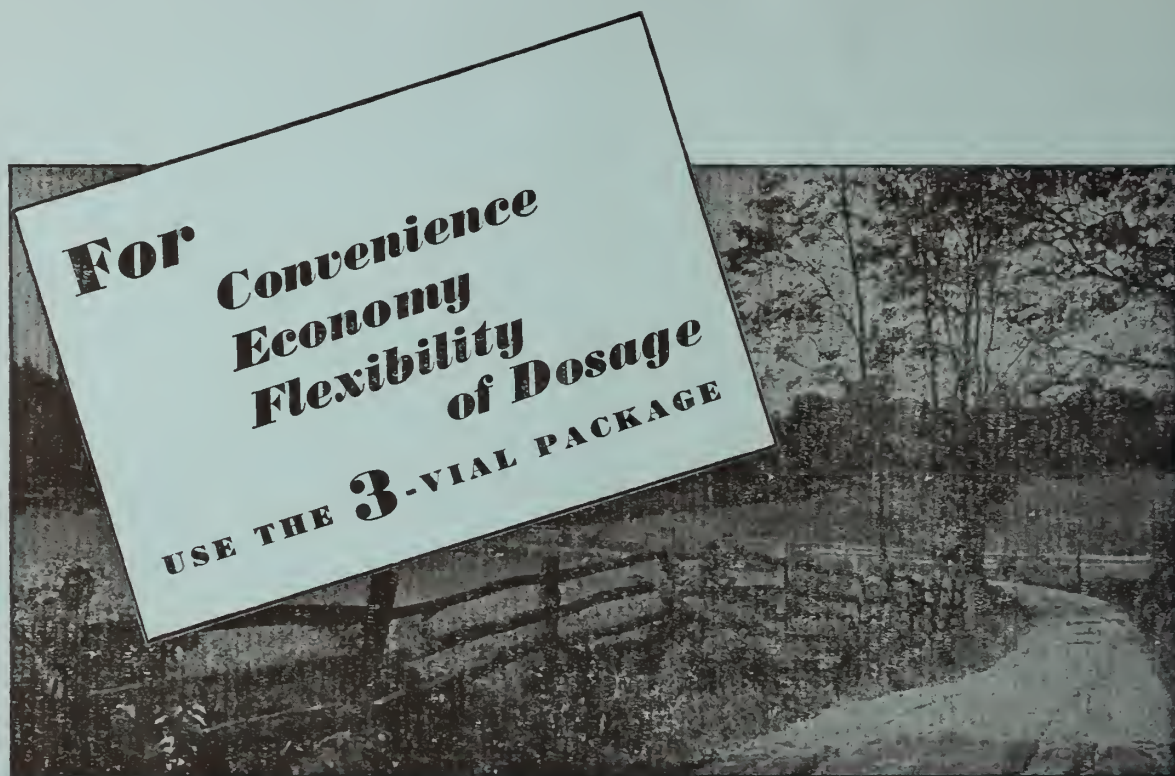
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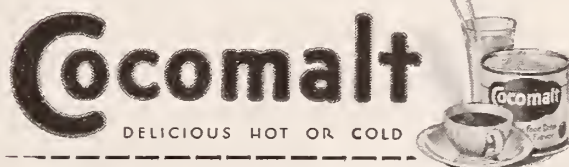
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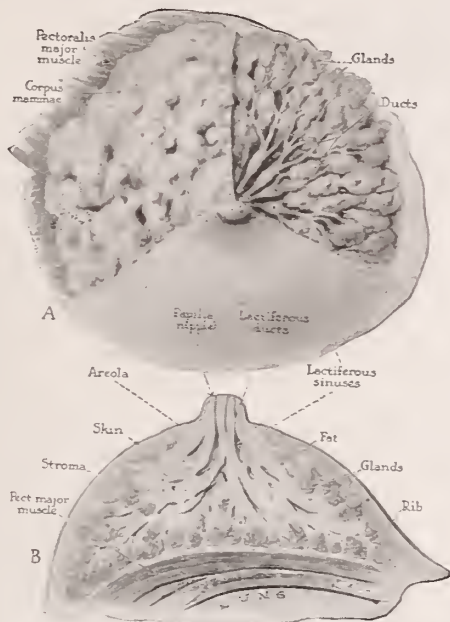
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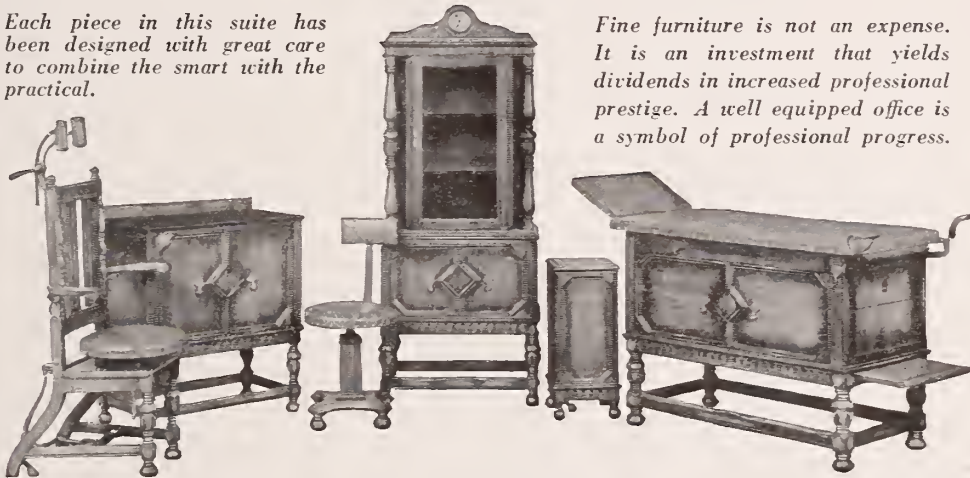
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Maine Medical Journal

The Official Organ of

The State and County Medical Societies

Vol. XXIII

Portland, Maine, May, 1932

No. 5

Editorial

We have just returned from attending the annual session of the A. M. A. at New Orleans. Space and time forbid an extended account of perhaps the most noteworthy Medical Convention in years. The weather was fine and not too hot, and the Crescent City certainly knew how to entertain her guests. There was little evidence of hard times and a fine spirit of liberal hospitality was everywhere manifest.

The Women's Auxiliary is to be heartily commended on the hospitable and efficient manner in which they entertained their visiting sisters. Nothing was omitted which could contribute to their comfort, enjoyment and safety as guests.

Our delegate will, doubtless, in his report at our State meeting next month, amply cover the activities of the business transacted by the House of Delegates. Dr. Carey, of Texas, was elected President, and the next session will be held in Milwaukee.

This number of the JOURNAL contains the complete program of our own annual gather-

ing. All things point to a large attendance and a most interesting session.

At this time it is important to remember that we owe it to ourselves and our local component societies to be present at Rangeley and take an active part in the proceedings, thus making them more fruitful for the advancement of medical practice in Maine.

Many startling readjustments are taking place in medicine and all fields of human endeavor today. Let us do our share in Maine to help make those readjustments which effect medical practice smoothly and with the least possible friction.

The Annual Report of the Secretary and Treasurer of the Association will appear in the June JOURNAL. At this time it suffices to say that our membership remains about the same, and at present writing, with practically all of the obligations of the year paid, there remains a substantial credit balance in the hands of the Treasurer.

Seventeen new members have been enrolled and we have lost fourteen members, according to the Report of our Necrologist, which appears elsewhere in this issue.

Hotel Reservations at Rangeley

Members and guests who for any reason fail to secure reservations at Headquarters, should communicate at once with the Secretary, 22 Arsenal Street, Portland, Maine. Bookings will be made for them at the Rangeley Tavern—Rates, \$4.50 to \$5.00 per day.



Eightieth Annual Session Maine Medical Association Program

WEDNESDAY, JUNE 15TH. Daylight saving time.

- 4.00 P. M. Council Meeting.
- 6.00 P. M. President's Dinner to Conference Leaders.
- 8.00 P. M. First Meeting of the House of Delegates.

THURSDAY, JUNE 16TH.

- 9.00 A. M. Conferences.
 - 4. Pathology. "Tumors—Their Classification and Gradation,"
Dr. Julius Gottlieb
 - 9. "History and Present Status of Cleft Palate and Harelip Surgery,"
Dr. Owen Smith
 - 10. "Thoracic Surgery,"
Dr. G. E. Young
 - 20. "Diabetes,"
Dr. J. O. Piper
 - 22. "Tuberculosis,"
Dr. Lester Adams
together with Drs. Estes Nichols, C. B. Sylvester and F. B. Ames
 - 29. "Bedside Diagnosis of Intraabdominal Pathology,"
Dr. N. A. Fogg
 - 35. Obstetrics. "Hemorrhage—Pregnancy, Labor and Puerperium,"
Dr. A. H. McQuillan
 - 37. Cancer and Radiation. "Clinical Diagnosis and Treatment of Cancer,"
Dr. Barbara Hunt, together with Drs. William Holt, V. T. Lathbury,
Louis Fallon and Edward Risley.
Dr. George C. Wilkins, radiologist from Manchester, N. H.
(By invitation)
 - 39. Ophthalmology. "External Ocular Diseases,"
Dr. E. E. Holt, Jr.
 - 40. "Psychiatry in Maine,"
Drs. S. E. Vosburgh and C. J. Hedin
 - 42. "Tracheotomy and Intubation,"
Dr. G. O. Cummings
- 10.30 A. M. Conferences.
 - 1. X-ray. "Bones and Gastrointestinal Tract,"
Drs. F. W. Lamb and L. F. Thaxter
 - 5. Administration—Medical Department of U. S. Army,
John G. Towne, Lt.-Col. M. C.
Surg. Gen. State of Maine
 - 7. "Malignancy of the Large Intestines,"
Dr. W. E. Webber
 - 12. "Surgical Conditions of the Gall Bladder,"
Dr. J. W. Scannell
 - 14. "Allergy—General Conditions,"
Dr. C. B. Sylvester
 - 15. "Syphilis,"
Dr. B. B. Foster
 - 21. "Pneumonia,"
Dr. B. L. Bryant
 - 25. Pediatrics. "General Considerations of Infant Feeding,"
Dr. T. A. Foster
 - 31. "Fractures in General Practice,"
Dr. Allan Woodcock
 - 32. "Faulty Foot Conditions,"
Dr. R. O. Meisenbach
 - 34. Gynecology. "Radium and Surgery for Malignancy in the Female,"
Dr. A. P. Leighton
 - 43. "Management of Acute Otitis Media,"
Dr. H. P. Johnson
- 2.00 P. M. Scientific Session.
 - Invocation,
Rev. Charles Francis Frederick, of Rangeley
 - 1. "X-ray Measurements in Obstetrics for the General Practitioner,"
Dr. True E. Makepeace, Farmington, Me.



Discussion opened by Drs. A. H. McQuillan and F. B. Ames.

2. "Diagnosis of Premature Separation of the Normally Implanted Placenta,"
Dr. Samuel R. Webber, Calais, Me.

Discussion opened by Drs. Adam P. Leighton and John Hanson.

3. "The Respiratory Tract as a Guide to Acid or Alkaline Therapy,"
Dr. DeForest C. Jarvis, Barre, Vt.
(By invitation)

Discussion opened by Drs. T. J. Burrage and F. T. Hill.

4. "Defective Hearing,"
Dr. Stanwood E. Fisher, Portland, Me.

Discussion opened by Drs. F. T. Hill and H. P. Johnson.

6.30 P. M. Dinner.

Speaker: Judge W. R. Pattangall, Chief Justice, Supreme Court of Maine.

8.00 P. M. Second Meeting of the House of Delegates.

8.30 P. M. Medical Motion Pictures, with Sound.

- (a) "Anatomy of the Female Pelvis and Perineum,"
- (b) "Experimental Gastroenterostomy,"
By Drs. H. B. Kellogg and W. F. Windle, Dept. of Anatomy
North Western University, Chicago.
- (a) "Suspension of the Uterus for Retrodisplacement,"
- (b) "Salpingectomy and High Fundic Amputation for Residues of Tubal
Disease,"
- (c) "Sub-total Abdominal Hysterectomy for Uterine Fibroids,"
By Dr. H. O. Jones, Associate Professor of Gynæcology
North Western University, Chicago.

FRIDAY, JUNE 17TH.

9.00 A. M. Conferences.

3. "Spleen, with Particular Reference to Its Relation to the Blood,"
Dr. Mortimer Warren
13. Sanitation. "Water Supplies and Sewage Disposal and Their Relation to
Health,"
Dr. E. W. Campbell
19. "Nephritis,"
Dr. H. S. Emery
24. Electrocardiography. "Clinical and Electrocardiographic Studies of the
Cardiac Arrhythmias,"
Dr. E. H. Drake
26. "Intestinal Obstruction,"
Dr. C. M. Robinson
30. "Renal Pain—Etiology and Diagnosis,"
Dr. C. H. Jameson
36. Obstetrics. "Use and Abuse of Forceps,"
Dr. R. B. Moore
38. Ophthalmology. "Ocular Disorders in General Practice,"
Dr. S. J. Beach
41. "Mental Disease,"
Dr. F. C. Tyson
44. "The Maxillary Sinus,"
Dr. F. W. Mitchell
45. Anæsthesia. "The Anæsthetist and Various Forms of Anæsthesia,"
Dr. O. E. Haney

10.30 A. M. Conferences.

2. X-ray. "Chests,"
Drs. John P. Goodrich and F. B. Ames
6. "Surgery of the Hand,"
Dr. E. M. McCarthy
8. "Atelectasis,"
Dr. Charles E. Bell
11. "Deep Pus in the Neck—Surgical Approach,"
Dr. F. T. Hill
16. "Present-Day Methods of Physiotherapy and Their True Valuation in
Modern Medicine,"
Dr. Louis Fallon
17. Immunology. "Immunization of Smallpox, Diphtheria and Scarlet Fever,"
Dr. W. L. Holt
18. "Constipation,"
Dr. Thomas J. Burrage
23. "Treatment of Heart Disease,"
Dr. W. J. Renwick

- 10.30 A. M. 27. "The Traumatic Head Case—Its Treatment," Dr. E. H. Risley
 28. "Acute and Chronic Appendicitis," Dr. W. N. Miner
 33. Gynæcology. "Extra-uterine Pregnancy," Dr. R. L. Reynolds
- 2.00 P. M. Scientific Session.
 President's Address, Dr. Ernest V. Call, Lewiston, Me.
 6. "Cardiac Surgery," Dr. Elliott Cutler, Cleveland, Ohio
 (By invitation)
 Discussion opened by Drs. Carl Robinson, E. H. Drake and Soma Weiss.
 (By invitation)
7. "Ocular Signs in Brain Injury," Dr. Howard F. Hill, Waterville, Me.
 Discussion opened by Dr. E. E. Holt, Jr., and W. E. Webber.
8. "Some Clinical Considerations of Disease of the Biliary Tract,"
 Dr. Frank H. Jackson, Houlton, Me.
 Discussion opened by Drs. E. W. Gehring, F. B. Ames, T. S. Moise.
9. "The Effect of Workmen's Compensation Act upon Industrial Surgery in
 New England," Dr. Stephen A. Cobb, Sanford, Me.
 Discussion opened by Drs. Charles Hunt and E. S. Hall.
- 7.00 P. M. Annual Banquet. Presentation of Medals by the President.
 Speaker: Dr. Richard S. Buker, Kentung, Burma.
 "Five and One-half Years' Medical Work in Kentung, Burma."

SATURDAY, JUNE 18TH.

- 9.00 A. M. Scientific Session.
- 10.00 A. M. "Review of the Recent Classification of the Polynuclear Leucocyte,"
 Dr. Herbert E. Thompson, Bangor, Me.
 Discussion opened by Drs. Mortimer Warren and Julius Gottlieb.
11. "The Principles of Vaccine and Non-Specific Protein Therapy,"
 Dr. John A. Kolmer, Philadelphia, Penn.
 (By invitation)
 Discussion opened by Drs. Julius Gottlieb and Soma Weiss. (By invitation)
12. "Painful Women," Dr. Edwin W. Gehring, Portland, Me.
 Discussion opened by Drs. H. M. Swift and F. H. Jackson.
- Executive Session.
 Election of Officers.
 Adjournment.

Scientific exhibit in the large auditorium.

SOCIAL EVENTS FOR THE LADIES.

Thursday afternoon, Card party in the hotel lobby.
 Friday afternoon, Lake trip and tea.

SCIENTIFIC EXHIBIT

A new departure for this year's annual meeting will be a scientific exhibit. It is felt that there must be interesting and worthwhile material which can be obtained to make this up. Members having pathological specimens, interesting charts, drawings or microscopic slides are asked to bring them to Rangeley, that they may be incorporated in this exhibit. It will facilitate the work

of the committee if members having such material will communicate with Doctor F. T. Hill, Waterville, Me.

THURSDAY EVENING ENTERTAINMENT

Thursday evening promises to be one of the best programs of the entire session. The Franklin County Medical Association have secured Judge William R. Pattangall,

Chief Justice of the Supreme Court of Maine, as the speaker following dinner. Judge Pattangall is too well known to require any elaboration. Everyone will be anxious to hear him. Following this will be a number of scientific medical motion pictures, with sound, depicting various surgical procedures.

Friday evening comes the annual banquet. The speaker will be Dr. Richard S. Buker, of Kentung, Burma.

As the hotel is already receiving a large number of requests for accommodations, it will be advisable for everyone to make their reservations as early as possible. These will be filled in the order of their receipt.

The Franklin County Association will arrange a golf tournament if sufficient interest is shown. For further information communicate with Dr. T. E. Makepeace, Farmington, Me.

CONFERENCES IN DETAIL

THURSDAY, JUNE 16TH, 9.00 A. M.

4. Pathology. "Tumors—Their Classification and Gradation," Dr. Julius Gottlieb
Demonstrations of gross specimens and microscopic slides.
9. "History and Present Status of Cleft Palate and Harelip Surgery," Dr. Owen Smith
10. "Thoracic Surgery," Dr. G. E. Young
20. "Diabetes," Dr. J. O. Piper
Definition, etiology, pathology, diagnosis, treatment, diet, insulin, complications and their management.
22. "Tuberculosis,"
Dr. Lester Adams, together with Drs. Estes Nichols, C. B. Sylvester and Forest B. Ames
Childhood tuberculosis: Definition, diagnosis, examination of "contacts," tuberculin surveys, X-ray examinations, primary infection. Importance of childhood tuberculosis in relation to adult disease.
29. "Bedside Diagnosis of Intraabdominal Pathology," Dr. N. A. Fogg
35. Obstetrics. "Hemorrhage—Pregnancy, Labor and Puerperium," Dr. A. H. McQuillan
Etiology, diagnosis, prognosis, treatment.
37. Cancer and Radiation. "Clinical Diagnosis and Treatment of Cancer,"
Dr. Barbara Hunt, together with Drs. V. T. Lathbury and Louis Fallon
39. Ophthalmology. "External Ocular Diseases," Dr. E. E. Holt, Jr.
40. "Psychiatry in Maine," Drs. S. E. Vosburgh and C. J. Hedin
Modern trends in psychiatry. Personality in reference to the psychiatric problem. Importance of background of individual patient. Present concept of evolution of the psychoses.
42. "Tracheotomy and Intubation," Dr. G. O. Cummings
Indications and technique illustrated by lantern slides and chalk drawings. Demonstrations of instruments. Case reports.

THURSDAY, JUNE 16TH, 10.30 A. M.

1. X-ray. "Bones and Gastrointestinal Tract," Drs. F. W. Lamb and L. F. Thaxter
Interpretation of films, technique.
5. Administration—Medical Department of U. S. Army (especially arranged for Medical Officers, National Guard and Reserves), John G. Towne, Lt.-Col. M. C. Surg. Gen. State of Maine
(a) Medical Regiment. (b) Military Hospital in Contradistinction to Civil Hospital.
7. "Malignancy of the Large Intestines," Dr. W. E. Webber
Incidence, cause, diagnosis, prognosis, treatment.
12. "Surgical Conditions of the Gall Bladder," Dr. J. W. Scannell
Etiology, diagnosis, prognosis, treatment.

14. "Allergy—General Considerations," Dr. C. B. Sylvester
Allergic disease: Inherited background, acquired sensitization, lowered threshold of defense. Allergic explosion: Asthma, vasomotor rhinitis, migraine, angioneurotic edema, urticaria, dermatoses. Allergic excitants: Digestive tract—foods, other substances: by respiratory tract—vegetable dusts, animal dusts.
15. "Syphilis," Dr. B. B. Foster
Lues, in its many manifestations, must be treated more intelligently, and, in its early stages, more intensively by the general practitioner, otherwise he should not attempt to treat it at all.
21. "Pneumonia," Dr. B. L. Bryant
Etiology with type grouping. Diagnosis: Lobar, bronchopneumonia, atelectasis. Complications: Effusion, empyema, abscess. Treatment: Drugs, serums, vaccines, mechanical.
25. Pediatrics. "General Considerations of Infant Feeding," Dr. T. A. Foster
History, breast feeding, artificial feeding—cows' milk mixtures, processed milks, condensed, evaporated, dry powdered—general foods.
31. "Fractures in General Practice," Dr. Allan Woodcock
32. "Faulty Foot Conditions," Dr. R. O. Meisenbach
Common foot conditions found in general practice, as acute and chronic flat foot, weak and pronated feet, rigid valgus, arthritic feet. Symptoms, cause and effect, diagnosis in doubtful cases. Indications for operations in tendon transplantation for polioparalysis, bunion, rigid valgus and hammer-toe.
34. Gynæcology. "Radium and Surgery for Malignancy in the Female," Dr. A. P. Leighton
Physics of radium, indications and contraindications, application and technique, cervical and corporeal cancer, radium vs. surgery, indications for surgery, statistics.
43. "Management of Acute Otitis Media," Dr. H. P. Johnson
Etiology of acute diseases of Eustachian tube, middle ear and mastoid process. Micro-organisms and their relation to changes. Signs and symptoms. Some manifestations of otitis media in infants. Treatment in surgical and non-surgical ears.

FRIDAY, JUNE 17TH, 9.00 A. M.

3. "Spleen, with Particular Reference to Its Relation to the Blood," Dr. Mortimer Warren
Anatomy, physiology, pathology. Function in blood formation and destruction in health and disease. Classification of splenomegaly. Relation of spleen to certain blood diseases and manifestations: Pernicious anæmia, hemolytic icterus and anæmia, purpura, leukæmia, other conditions. Therapeutic splenectomy: Indications, value of.
13. Sanitation. "Water Supplies and Sewage Disposal and Their Relation to Health," Dr. E. W. Campbell
Specific examples of pollution from wells and springs. Various methods and practices of purifying water to make it safe for domestic purposes. Practical methods of sewage disposal so as not to contaminate water supplies.
19. "Nephritis," Dr. H. S. Emery
Diagnosis, renal function tests, treatment.
24. Electrocardiology. "Clinical and Electrocardiographic Studies of the Cardiac Arrhythmias," Dr. E. H. Drake
Consideration of tachycardia, bradycardia and irregularities of the pulse. Tracings of these will be shown and discussed, together with clinical manifestations. Correlation between clinical and electrocardiographic findings.
26. "Intestinal Obstruction," Dr. C. M. Robinson
Necessity of early diagnosis. What not to do. How best to treat the patient with known or suspected obstruction until surgical relief is obtained.
30. "Renal Pain—"Etiology and Diagnosis," Dr. C. H. Jameson
Renal pain without clinical evidence of infection not infrequently leads to mistaken diagnosis and ill-advised operative procedure. Etiology in such cases will be discussed.

36. Obstetrics. "Use and Abuse of Forceps," Dr. R. B. Moore
Indications for use of forceps. Preparation for forceps delivery. Types of forceps in common use; their advantages and disadvantages. Varieties of forceps operations. Technique of introduction, application and traction. Dangers of improper use of forceps.
38. Ophthalmology. "Ocular Disorders in General Practice," Dr. S. J. Beach
Eye conditions seen by the family physician: Accidents, ocular disturbances of bed-ridden patients, ocular manifestations of general disease. Significance of ocular symptoms: Failure of vision, pain, redness, swelling, together with extraocular indications, like headache, anorexia, vertigo. Importance of diagnosis and treatment in glaucoma, cataract, iritis, strabismus and ocular complications of the exanthemata.
41. "Mental Disease," Dr. F. C. Tyson
Organic group: General paralysis, leutic psychosis, organic psychosis (cerebral arteriosclerosis), psychosis associated with somatic diseases, toxic and infective exhaustion disorders. Functional group: Dementia præcox (schizophrenia), manic depressive psychosis, psychoneurosis. Diagnosis, prognosis, treatment.
44. "The Maxillary Sinus," Dr. F. W. Mitchell
Maxillary sinusitis: Cause, symptoms, diagnosis, treatment—medical and surgical—adults and children. Maxillary sinus in its relation to the frontal and ethmoid sinuses, as a focus of infection. Malignancy, differential diagnosis, treatment. Analysis of results.
45. Anæsthesia. "The Anæsthetist and Various Forms of Anæsthesia," Dr. O. E. Haney
The need of an anæsthetist in the medical community and as a part of the surgical team. The seeming lack of appreciation of this fact by most medical men, and especially surgeons. Some of the newer anæsthetics and their uses.

FRIDAY, JUNE 17TH, 10.30 A. M.

2. X-ray. "Chests," Drs. John P. Goodrich and F. B. Ames
X-ray diagnosis of chest pathology.
6. "Surgery of the Hand," Dr. E. M. McCarthy
The hand as one of the most important members of the human body. Fractures involving bones of the hand, crushing injuries to the hand. Surgery of the tendons, infections, restoration of function following old injury.
8. "Atelectasis," Dr. Charles E. Bell
Lantern slides demonstration.
11. "Deep Pus in the Neck—Surgical Approach," Dr. F. T. Hill
Parapharyngeal abscess, Ludwig's angina, surgical landmarks, submaxillary approach, cadaver demonstration.
16. "Present-Day Methods of Physiotherapy and Their True Valuation in Modern Medicine," Dr. Louis Fallon
17. Immunology. "Immunization of Smallpox, Diphtheria and Scarlet Fever," Dr. W. L. Holt
Smallpox: Many unvaccinated children, objections to old methods, puncture method, etc. Diphtheria: Toxoid vs. T. A. T. Physician's duty to pre-school child. Scarlet fever: Passive immunity by antitoxin, active toxin, advised for nurses, internes, exposed children in school epidemics. Motion pictures.
18. "Constipation," Dr. Thomas J. Burrage
Personal experience with chronic constipation. Consideration of purely functional cases, ruling out constipation due to organic causes. Classification, causes, diet in relation to constipation. Treatment by means of oil enemata, bland diet and atropine. Associated chronic colitis.

23. "Treatment of Heart Disease,"
Etiological treatment, general treatment, symptomatic treatment, drug treatment.
Dr. W. J. Renwick
27. "The Traumatic Head Case—Its Treatment,"
Importance of systematized plan of treatment. Confusion arising from old terms, "con-
cussion," "contusion" and "compression." A logical arrangement in three groups, based
on intracranial pressure. A standard set of rules to follow in the treatment of all head
injuries. Operative and non-operative indications and results.
Dr. E. H. Risley
28. "Acute and Chronic Appendicitis,"
Symptomatology—subjective and objective—treatment.
Dr. W. N. Miner
33. Gynæcology. "Extra-uterine Pregnancy,"
Etiological factors, consideration of some recent methods in diagnosis, prognosis, treatment.
Dr. R. L. Reynolds

THE TABLE OF CONFERENCES

Thursday, the 16th 9.00 A. M.	Thursday, the 16th 10.30 A. M.	Friday, the 17th 9.00 A. M.	Friday, the 17th 10.30 A. M.
4	1	3	2
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(Perforation for tearing off.)

To Doctor F. T. Hill,
Professional Building,
Waterville, Me.

I desire to attend Conferences Nos.
(Select four)

In case any of these are filled I desire Nos.
(Select four)

.....M. D.
(Signature)

Fill out and mail to Dr. F. T. Hill, Chairman of the Program Committee.



Observation on the Management of Ureteral Calculi

By CLINTON NOYES PETERS, A. B., M. D., F. A. C. S.,

Attending Urologist, Maine General Hospital, U. S. Marine Hospital, Portland, Me.

While the etiology and exciting factors producing calculi of the urinary tract are not fully understood, intelligent treatment of a calculus once it has entered upon its course down the ureter demands its successful removal with the least possible harm to the patient, leaving a good functioning and free draining organ, uninfected.

Although each case presents its individual problems, there are certain known factors of mechanics, physiology, and pathology which may in general be applied with benefit in all cases. That the management of ureteral calculi is still a subject upon which opinions diverge greatly may be easily proven by glancing over the reports of different men prominent in urology in their methods of handling the cases. At the Mayo Clinic they have reported up to 50% surgical removal, while at the Crowell Clinic over 87% were aided in their downward course successfully by cystoscopic manipulations.

It is not the object of this paper to advocate any particular line of treatment in handling ureteral calculi, but to place before you a few methods which have been successful in my hands, and to advocate in general my reasons for adopting certain procedures in certain types of cases. In doing this I am claiming nothing in the way of pioneer work, my opinions having been formed by reports of several other men and their methods applied to my own cases and those on the Urological Service at the Maine General Hospital.

In the past four years, thirty-seven cases of ureteral calculi show five removed by open operation upon the lower ureter, two nephrectomies for destroyed kidney, twenty-eight passed with the aid of cystoscopic manipulations, and two under treatment at present.

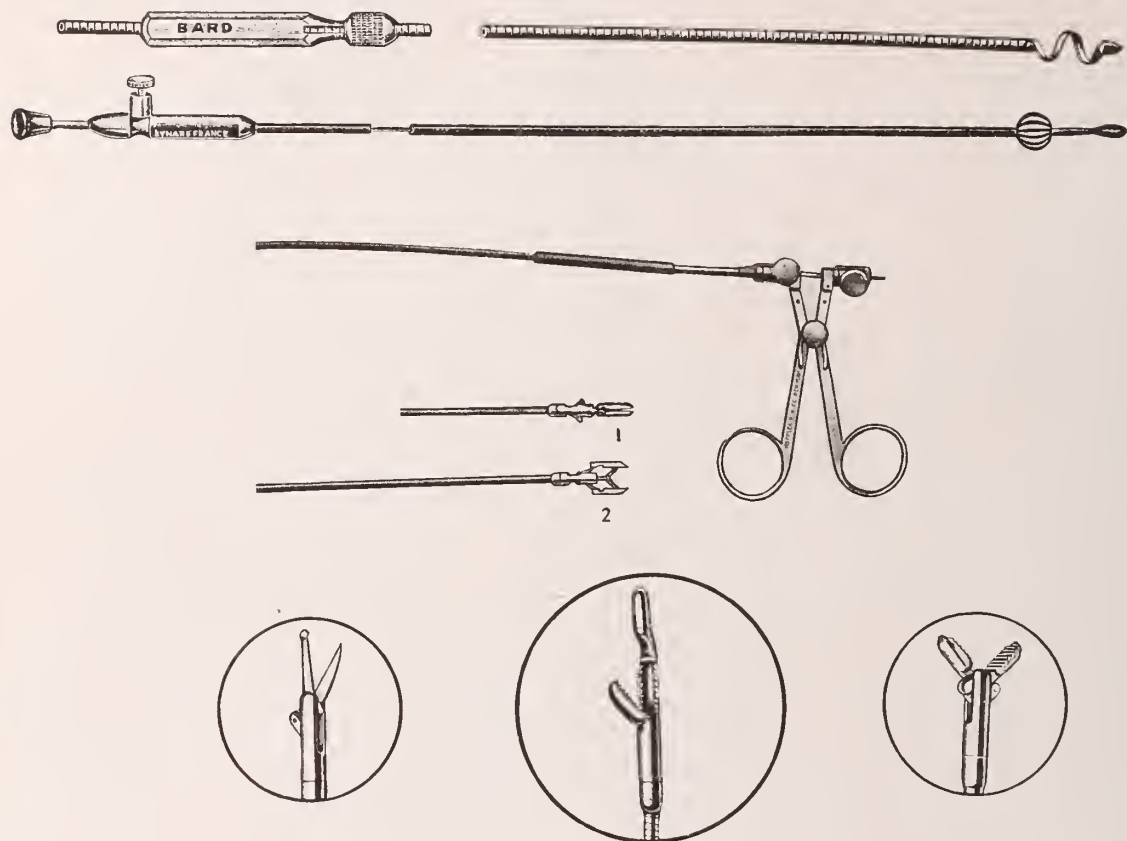
In the diagnosis of ureteral calculi, we

rely consistently upon the X-ray. But, as many different conditions show shadows in the general region of the ureter, we find it practical to pass a metal impregnated silk ureteral catheter up to the pelvis of the kidney to further limit the field and substantiate the diagnosis. Given the cardinal symptoms of pain of a colicky nature radiating to the groin, with microscopic red cells in the urine, with a shadow on the X-ray plate in direct contact with a catheter placed in the ureter, we are reasonably safe in making a positive diagnosis. Without the ureteral catheter, X-ray is nearly valueless, as a mistaken diagnosis will result in a large percentage of cases, and much poor surgery is done upon the ureter from a diagnosis not properly substantiated.

In line with our ureteral catheterization, pyelography is of great assistance in determining the amount of damage done by the presence of a ureteral calculus, but caution should be observed, and wherever there is a possibility of a complete block of the ureter and the catheter is not able to pass the obstruction, retrograde pyelography is dangerous, in that it is possible to force the pyelographic media beyond the obstruction. This endangers the kidney by the addition to an organ already lowered in resistance by back pressure and faulty drainage a certain foreign and slightly irritating solution, which may carry infection.

In cases of this type further information may be obtained by intravenous pyelography, which, to my mind, is very valuable, both as a medium for X-ray shadow and also a test for renal function of the injured kidney.

Having established thusly a definite diagnosis, we have to consider facts of importance regarding size and position of the calculus and size of the ureter, with special



Ureteral instruments for cystoscopic use (from catalogue reproduction).

1. Dilator, tip closed. 2. Tip open. 3. Flexible shaft and scissors handle. 4. Scissors for enlarging ureteral orifice.
5. Stone forceps for ureteral use. 6. Grasping forceps. 7. Probang stone dislodger. 8. Corkscrew tip stone dislodger.

regard to the size of least dilatable portions. These are first at the ureteropelvic junction; second, at the brim of the pelvis, where the ureter is in close association with the iliac vessels; and third, at the intramural junction of the ureter and bladder. Here, the ureter passes obliquely through the bladder wall and ends in the ureterovesical openings. It will be found in a series of cases that at least 50% of the calculi which remain in the ureter will lodge in this position, and their consideration for removal involves the past history, present condition, and future of each individual case.

As at least 15% of cases either give a history of previous stone, or subsequently will have a recurrence, and as a ureter which has previously passed a calculus is more likely to pass another without aid, some consideration in the handling of the case may depend on the stone history. Moreover, as at least

25% will pass spontaneously, nature should be given consideration before open surgery is resorted to. In fact, unless there is a definite reason for recourse to open operation, I feel that assistance to nature by cystoscopic manipulation is the first choice and may be attempted at the time of ureteral catheterization for diagnostic purposes. Periodically, there is brought to the attention of the medical profession a new instrument for dilating the ureter and removal of stone, which is hailed as the last word in efficiency by the inventor. Many of those are extremely ingenious and most are a distinct aid in some cases, but although I have used several, I have not arrived at the point where I can say "discard all others and use this one instrument."

In depending upon cystoscopic instrumentation, one must realize that the most efficient force of all is the natural tendency



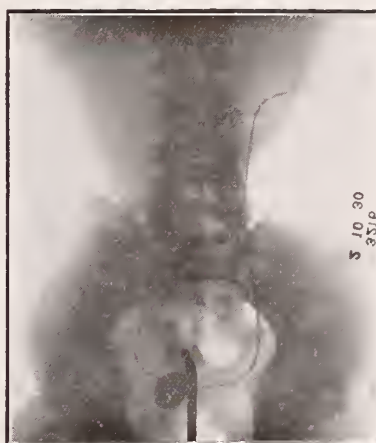
I. Renal calculus beginning its course down the ureter.



II. Ureteral calculus in contact with ureteral catheter.



III. Corkscrew stone dislodger passed by calculus.



IV. Ureter blocked by three large calculi; kidney destroyed: large calculi in bladder.

of the peristalsis of the ureter and pressure of the excreting kidney. Treatment medically consists of copious amounts of fluids, morphia to control pain, and heat for spasmodic relaxation. This is a necessary adjunct to cystoscopic manipulations, as usually a period of several days to several months, comprising a varying number of instrumental dilatations, is necessary before the ureter dilates and the edema subsides and nature expels the calculus.

Dilatations should be confined to the area below the stone and efforts made to dislodge or turn the stone so that peristalsis may work it downward aided by urinary pressure. One or several catheters may be left in the ureter for varying lengths of time, and thus relieve the pressure on the kidney,

drain away infected urine and act as dilators. Efforts to hook out the stone, unless it is seen protruding from the orifice, are not only usually unsuccessful, but to my mind dangerous, in that much damage may be done the ureter. Where the orifice is small, it is feasible to enlarge it by cutting with small scissors. Two cases in the series were so treated. Enlargement by fulgurating the orifice itself should not be done, as I found out by trying it. Edema following the operation may completely close the lumen. Dourmaskin recommends fulguration to relieve edema of the ureteral mound. He has noted the voluntary expulsion of a stone after this procedure without further manipulations. I have had no occasion to employ it, but my reactions are that the

high frequency spark should be used with caution.

That a calculus can be impacted in the ureter over a long period of time without great damage to the kidney has been noted on numerous occasions. In my series, one calculus had been stationary about two inches below the ureteropelvic junction for twelve years and was passed after six cystoscopic manipulations over a period of three months. In this case the stone was distinctly grooved for urinary drainage, and the kidney in very good condition.

Management of cases selected for cystoscopic manipulations require constant observation. At any time, drainage may be interrupted by complete blocking, so that either passage of a ureteral catheter or surgical intervention may become necessary. The average case should not be confined, but allowed up and actively engaged in the customary routine, with a certain amount of exercise to aid in the descent of the stone. Periodic X-ray should keep track of the progress, and arrestment for a period calls for further manipulation by bougie and dilator. Care should be taken that a patient report periodically, for the tendency of all cases is to let matters well enough alone unless pain demands relief. To illustrate: One case in the series was not heard from after the second cystoscopy. Two years later, I removed a vesical calculus the size of a golf ball by open operation. From a ureteral calculus the size of a pea to a vesical calculus the size of a golf ball, with three weeks in the hospital for surgery, was the price of his indifference.

Most small calculi, when they have left the ureter and entered the bladder, are voided by the patient. This is especially true in female patients, where the urethra is short and readily dilatable. In male cases, retention of a calculus in the bladder is quite common. With the observation lithrotrite it is a simple matter to crush them. Occasionally, in the male, the stone will lodge in the urethra. This calls for immediate attention. Five cases under my care have met with this

incident. Two in the anterior urethra were relieved by meatotomy and removed by a forcep. Two in the posterior urethra were removed by perineal section. The third impacted behind a urethral stricture was pushed back into the bladder while dilating the stricture and was subsequently passed.

Thomas, supplemented by Culver, has detailed certain cases for surgery in the following suggestions:

1. Large stone fixed.
2. Distention of the kidney.
3. Reflex anuria.
4. Severe reaction to cystoscopy.
5. Stone in the only functioning ureter.
6. Stone with pyelonephritis.

I feel the last reason may at times be disregarded unless the case is one for nephrectomy. It is a peculiar thing that complete destruction of a kidney from impacted calculi can occur with very little disturbance to a patient. In my series, two cases were completely blocked and the kidney so destroyed that only a very thin sac distended by several quarts of mucopurulent fluid remained. And yet these patients had both been actively working, and their stone history dated back ten years to the first attack of renal colic. A case of this type may be cured by nephrectomy and the stone left with no bad after-effects.

There are two incisions employed for operative removal of a calculus. First, the so-called Gibson incision, above and parallel to Poupart's ligament, and the median incision described by Judd. Personally, I have been able to remove surgically all my low cases through a median incision. Occasionally, it is very difficult to pick up the ureter, and on one occasion I opened the bladder and passed a bougie up to the stone, which was a distinct help in finding the ureter. An indwelling catheter before operation has been of great assistance in locating this organ in several instances, but occasionally, in a low stone, it is impossible to pass by the calculus and leave a catheter in the ureter. Where the obstruction has been partial for some time the ureter may be dilated to extreme

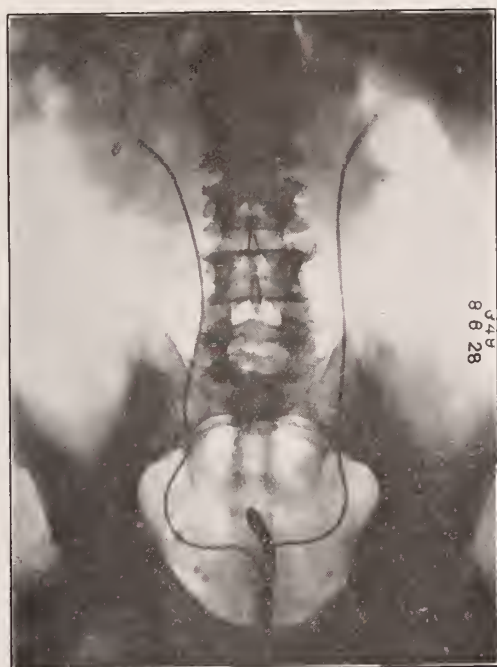
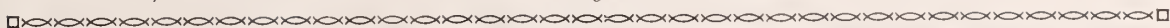


PLATE A.—Renal calculus in pelvis. Operation refused. August 6, 1928.

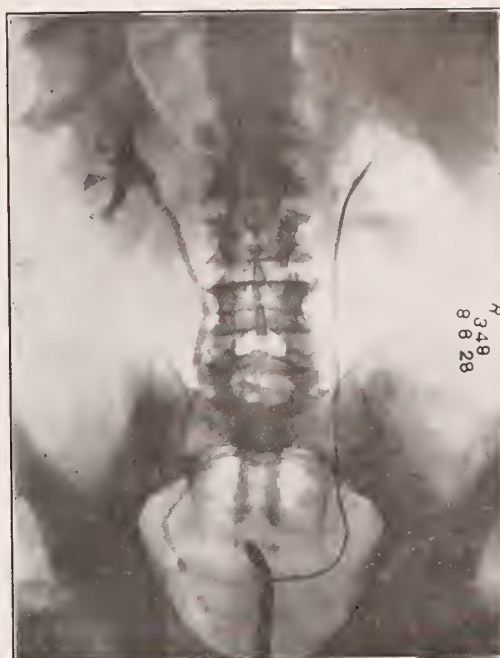


PLATE B.—Same case showing normal pelvis with renal calculus. August 6, 1928.



PLATE C.—Same case April 25, 1932. Calculus impacted in lower ureter. Kidney free from calculi.



PLATE D.—Same case April 25, 1932. Shows kidney destruction from back pressure and infection.

size. In one case in the series the ureter was at least an inch in diameter. In feeling for the stone it suddenly popped back into the kidney pelvis (the patient was under spinal anesthesia and in the Trendelenberg position), but the ureter was so large that by reaching up from a fairly high incision I recovered it with a pair of very long stone forceps.

In opening the ureter it is preferable to

make the incision above the stone if there is inflammatory thickening of the organ. A bougie should be gently passed into the bladder to see no obstruction remains.

On three operative cases, I left a large ureteral catheter in place for forty-eight hours. In two of the three, the bladder had been opened for preliminary drainage for subsequent prostatectomy, and the catheter brought out through the suprapubic open-

ing. On the third, I removed the catheter from the bladder with the operating cystoscope. Should the surgeon be unfamiliar with cystoscopy, a small lithrotrite could easily pick up the free end of the catheter and remove it through the urethra.

Suturing the ureter is a procedure of choice. Drainage to the wound in the ureter I feel a conservative step which may avoid complications.

Usually, post-operatively, there is seepage of urine from the wound, but after a few days this ceases. Stricture of the ureter from incision should not occur if the operator has worked carefully.

IN SUMMARY

I. A positive diagnosis is essential before any course of management is decided upon. This entails the use of cystoscope, ureteral catheter, X-ray and pyelography.

II. Cystoscopic manipulation is the procedure of choice in a large majority of cases.

III. Successful removal of the ureteral calculus can be accomplished in the majority of cases without open surgery.

IV. Certain cases as detailed demand surgical intervention. The choice of operation must be determined from the facts of each individual case.

REFERENCES.

"Management of Calculi in Lower Ureter." J. Bellinger Barney and Richard Chute, *Journal of Urology*, February, 1931, Vol. XXV.

"Management of Ureteral Calculi." Harry Culver, M. D., *Transactions Chicago Urological Society*, 1931, Vol. I.

"The Bases for Management of Ureteral Calculi." Ralph Dourmaskin, *Journal A. M. A.*, January, 1932, Vol. LXXXVIII.

Case Records of the Central Maine General Hospital

Edited by JULIUS GOTTLIEB, M. D.: Assisted by MAURICE DIONNE, M. D.

CASES III AND IV

DISORDERS OF THE MENSES WITH ANEMIA

PRESENTATION OF FIRST CASE

Dr. J. W. Scannell: This is the case of a sixteen-year-old girl who complains of prolonged, irregular and frequent menses since the onset of her periods four years ago. She also feels quite nervous and weak, but otherwise she has no symptoms. At the onset she was seen by two physicians, who found that she was anemic. Iron was administered by mouth and by the intramuscular route. Ergot was tried without results. Her anemia improved, but there was no change in the character of her menses. She then went to a clinic in Boston and was given some endocrine products, again without results. On her return, March 21, 1931, she entered the hospital for the first time and her pelvic organs were examined under anesthesia. The hymen was intact; the cervix swollen, pinkish and doughnut-like

in form, with some eversion present. No polypi were seen. The uterus was soft. A curettage produced an abundance of granular tissue, which the pathologist called the result of glandular and interstitial hyperplasia. He also mentions occasional mitotic figures, both in the irregular glands seen and in the supporting framework. Following this curettage, after cauterization with iodine and phenol, a small vaginal pack was inserted and remained ten days. Iron therapy was continued throughout. She did not bleed from this time until July, 1931, at which time she started to flow following an automobile ride. Coincident with this, she again was placed on glandular therapy and given a diet. She was seen recently by a Boston physician, who suggested cod liver oil and another preparation. At this entry, February, 1931, she presents the picture of health and may go two or three weeks

without any trouble and then flows for the same length of time or even longer.

Dr. Frederick R. Good: Here is a girl fifteen years old who started to menstruate at twelve, and who shows signs and symptoms of menorrhagia and metrorrhagia. We know there is no need to consider any decidual cause. She is too young to have fibroid uterus or a submucous polyp. On the other hand, hypertrophic endometritis is a condition frequently encountered in young girls, and many times it is accompanied by an hypo-ovarianism. The pathologists mention mitotic figures. These we cannot forget, altho there is but a rare possibility of anything malignant. I have also seen many cases of irregular and increased flowing due to an endocervicitis of traumatic origin, usually associated with a cervix elongated sufficiently to come in constant contact with the posterior vaginal wall. Because of this contact, a constant irritation is kept up. The fact that the ride in an automobile started this condition anew may possibly favor this diagnosis.

In regard to treatment, I have seen enough of these cases to know that the least done, except for diet, iron and general supportive treatment, the better off they are. I would want her symptoms to be much more severe at this time before advising another dilating and curetting. I would add, however, that the curettage done was excellent treatment, because she had been flowing for over two years. I would not advise the use of radium or X-ray, as some men might advise. I would think it a good idea to give calcium lactate. I doubt if ergot is of benefit in cases of this kind, because it will not cause a normal-sized uterus to contract. Pituitary extracts probably fall in the same class, that is, as far as contractility is concerned. I would advise against leaving a vaginal pack in for ten days; as a matter of fact, I feel it would be better not to pack at all. If, however, it should seem necessary to pack any case for any reason, I feel that twenty-four hours should be the limit for packing. To leave a pack in longer is to flirt with danger—to flirt with the possibility of an infection, which would be far worse than the original condition.

Dr. H. Goldman: What relation does chlorosis have to this condition?

Dr. Good: About chlorosis—when I was a medical student, I read and heard a lot about “chlorosis” in young girls. I now look upon it as a secondary anemia due to loss of blood, and not of great consequence. I feel the “chlorosis” so called is the result of the bleeding, and that the bleeding is not the result of the “chlorosis.”

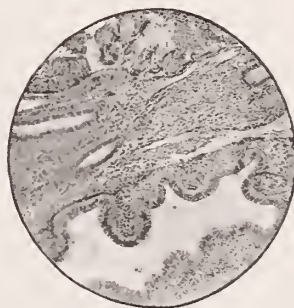
Dr. E. Pierce: How does this condition of bleeding influence conception and pregnancy?

Dr. Good: In so far as conception is concerned, it has no bearing one way or another. If the patient becomes pregnant, the decidual layers form, and they will cover the endometrium. This may make it healthier endometrium and thus help the condition. I have had this occur in a few cases of my own. We must not forget, however, the possibility of the diseased endometrium causing a miscarriage.

Dr. E. Pierce: What about an increased possibility of separation of the placenta?

Dr. Good: In these cases one must consider endometritis as possibly having something to do with it. But we also have some cases which give perfectly normal histories. In theory, a girl like this one might be prone to it, but it does not work out this way. Ninety-five per cent of premature separation of placenta are toxic.

Dr. W. J. Scannell: What significance do the mitotic figures have?



Dr. J. Gottlieb: Mitotic figures are not uncommon in any situation where active regeneration is physiological. The endometrium (See figure 1) serves as an excellent example of such a process, hence the mitotic figures as seen here are of no grave import. These are

frequently seen in hypertrophic endometritis. A history pertaining to menstrual disorders is of great value to the pathologist in evaluating structural changes.

Dr. Good: I would rather take your opinion than mine. The proof lies in the time that has already elapsed with no evidence of malignancy developing.

Dr. Scannell: What about the use of radium in these cases?

Dr. Good: Radium should be used conservatively, and I doubt if I would ever use it in a case of this kind—the girl is too young. Generally speaking, I know of two cases, much older than this patient, who were treated thusly for metrorrhagia and menorrhagia, and whose menses returned three years later. Small doses are more apt to lead to a relative sterility, large doses to a permanent sterility. In using radium in these conditions, I would never fail to warn the patient that she may have to wait three to seven years before a thorough return of her normal menstruation, and that possibly her periods may never return.

Dr. C. Cunningham: Would not the use of radium make the death of the fetus more liable in the event a patient should become pregnant?

Dr. Good: I should say decidedly no. The baby should be 100% perfect as far as any effect the radium might have.

PRESENTATION OF SECOND CASE

Dr. E. C. Higgins: This is the case of a nineteen-year-old girl who has been complaining of menorrhagia for the past three years. She states that the onset of her menses occurred at fourteen. From fourteen to sixteen years she had very scanty menses occurring at intervals of three to seven months. She visited one physician at the end of this period, who told her to wait, but who at the same time gave her some pills to take. Soon afterward she had profuse menses, and shortly after she had a period during which she bled profusely for about three weeks. Ergot was given, with no results, and the patient was in bed. She then went along without alarming bleeding until September, 1930. She then started to flow almost continuously until the

first entry in February. At this time vaginal packs were used to control bleeding and patient fared well for one month, during which she was in bed. She then went to a clinic in Boston, where she was advised to have a curettage of the uterus, and on her return this was done. She then had no great trouble until September, 1931. At this time she again started to flow profusely, and at this entry she states that she had been bleeding for the past three weeks.

A moderate secondary anemia was found. The basal metabolism was minus 19. X-ray of the sella turcica and visual fields negative. Normal blood chemistry and normal "phthal-ein" elimination.

Dr. Good: Have you always gone over your time?

Patient: Yes, I have.

Dr. Good: Have your periods ever been regular?

Patient: They never have.

Dr. Good: What was the appearance of the cervix when the dilating and curetting was done?

Dr. Higgins: The cervix showed a fair degree of hypertrophy. It was enlarged and admitted a sponge forceps up to internal os. There was some eversion and edema present.

Dr. Good: We have already said much in the first case which would apply here. Hypo-ovarianism is associated with hypertrophied endometrium many times, and one often finds that menses occur only every two or three months, but then there is profuse bleeding, often lasting ten to twenty days. I would suggest supportive treatment, iron and plenty of ovarian extract. Dr. Rowe advised mixed gland; many are helped thus. One good hormone preparation is Varium. Mammary extract might also be tried. Calcium lactate could well be given with the iron. I would distinctly advise against several curettages of the uterus. There is one peculiar thing about this girl. She suggests to me one with Frohlich's syndrome except for the absence of the obesity. I would like to ask if there is an abnormal growth of hair all over the body?

Dr. Higgins: No, there is a perfectly normal distribution.

Dr. Good: With a true Frohlich's syn-

drome there is an hirsute appearance on different parts of the body. X-ray and radium apply here exactly as in the previous case.

Dr. H. Goldman: How about giving some pituitary extract?

Dr. Good: I feel that the pituitary gland plays an important part in most of these cases of ovarian dysfunction. We are still in the experimental stage in so far as the pituitary gland is concerned, and as yet I am not ready to speak authoritatively on the many-sided relationship of the pituitary and ovary. Truly, work has been done, but there is still much to be done.

Dr. M. J. Dionne: The mechanisms underlying the menses and their periodicity have been studied intensively in the recent years. As a result, a definite relationship between anterior pituitary hormones and those of the ovaries has been demonstrated. As in other biochemical processes, further advance lies in the quantitative determination of these fac-

tors. These procedures can now be carried out in the laboratories with fair ease and are to be undertaken here in the near future. In cases of overproduction, partial excision of the ovaries or neutralization is advocated by some men, while underproduction is said to be remedied by injections of the deficient internal secretion factor.

Dr. Gottlieb: We are prone to think of menstrual disorders as reflecting either pituitary or ovarian dysfunction. The host of therapeutic agents is in itself proof of our imperfect knowledge of these phenomena. The work of R. T. Frank extends a ray of hope in the direction of more definite diagnosis by accurate studies of the female sex hormone in the blood stream. It behooves the laboratory to concentrate its efforts in the study of these hormones, even though its practical application may not prove fruitful in the immediate future.

Diphtheria Immunization in Maine

By WILLIAM L. HOLT, M. D., Director, Division of Communicable Diseases, State Bureau of Health

Maine has been rather late in undertaking to immunize children on a large scale against diphtheria, and this was perhaps natural, because, except for 1921, we have had comparatively low death rates from the disease. For 1920 to 1928 our diphtheria mortality rate averaged only 6.4 per 100,000, not much over half the corresponding figure of 11.0 for the U. S. Registration Area. In 1926 only two states had lower rates than Maine.

Until the early spring of 1929 only a very few towns, Portland, Auburn, Lewiston, Westbrook, Woodland, known to the writer, made any attempt to protect their children by immunization against this most easily prevented disease of childhood. In the fiscal year 1929 to 1930 we held four diphtheria immunization clinics and gave toxin-antitoxin to 226 children. The next fiscal year, 1930 to 1931, such clinics were held at

eleven towns and 1,874 persons, mostly school children, were immunized. In the present fiscal year clinics have been held in twenty-eight towns and 1,938 children given two doses of toxoid. A few more clinics will be held in May and June, so the year's total will be well over 2,000.

I have given in the past three years twenty-seven special lectures to lay groups at Grange meetings and P. T. A.'s on this subject and showed a film "Preventing Diphtheria."

Some of the main points concerning this popular measure that may not be known to some of our readers are the following. The Schick test is easily done, if one has a fine, sharp needle, preferably No. 25 or 26, and it is very important to do it two or three months after toxin-antitoxin or toxoid is given, in order to find out which children have not reacted successfully but need an-

other dose or two. The best day for reading Schicks is the third or fourth, then false positives will have faded, while delayed positives will not be missed. It is not worth while to do a Schick *before* immunizing babies or children under ten.

The now preferred material for diphtheria immunization is toxoid, discovered about the same time by Ramon, of the Pasteur Institute, and Glenney and Hopkins, of England, in 1923. It is made by adding formalin to virulent diphtheria toxin, to 0.3%, and leaving it for three weeks, which detoxifies it so that it is harmless to guinea pigs and children. It has been used on millions of children in Canada, France and Spanish America. It has the following advantages over toxin-antitoxin: (1) It immunizes about 95% of susceptible persons, while toxin-antitoxin immunizes only 70-85%; (2) Works faster than "T. A. T.," so the child is protected in six weeks to two months after the second dose, against three to six months for "T. A. T."; (3) It is less liable to make young children sick; (4) It cannot sensitize to the horse serum present in any antitoxin that may be given later for scarlet fever or tetanus.

The State Bureau of Health cannot furnish Schick material or toxoid free, but local health officers can get a 40% discount, which makes a 30 c.c. vial for fourteen or fifteen children cost about 16 cents per child.

The toxoid is not given at weekly intervals, but the second injection is given three or four weeks after the first, and only two are given.

What percentage of susceptible children must we immunize in order to eradicate diphtheria in a city? This was discussed at a special conference at Montreal of the American Public Health Association last fall. In Auburn, N. Y., the first American city to eradicate diphtheria, they at first did 70% of the older children, in school, but did not succeed until they had also immunized 30% of the pre-schools. In Niagara Falls they had to immunize over 45% of pre-school

and 85% of the older children. In Detroit they did 65% of the children under five, but this did not stop the disease, and in Racine, Wis., they did half the children 5-9 years old, 5,000 in a city of 70,000, yet the morbidity fell only 20%! The consensus of opinion was that nothing less than two-thirds, and better three-fourths, of the pre-school children and over 50% of the school children must be immunized in order to give safe protection to a community. Moreover, we must continue our diphtheria work annually, as otherwise a crop of susceptible babies will grow in a few years.

Just a final word on the duration of the immunity conferred. Our best authority, Dr. Wm. H. Park, of New York City, said at the conference: "In ten years no child given toxin-antitoxin and found Schick negative has lost his immunity." The toxoid doubtless gives just as lasting immunity.

State Mortality and Morbidity Reports

DISEASES	Cases Reported in Four Weeks Ending April 30, 1932	Deaths in March 1932
Measles,	1,130	6
German measles,	527	0
Scarlet fever,	167	1
Bronchopneumonia,	152	57
Lobar and plain pneumonia,		57
Whooping cough,	128	1
Chicken pox,	122	0
Mumps,	76	0
Pulmonary tuberculosis,	65	34
Other forms,		13
Influenza,	62	41
Gonococcus infection,	56	0
Syphilis,	34	3
Vincent's angina,	16	0
Diphtheria,	4	3
Meningitis, cerebrospinal,	3	2
Typhoid fever,	2	1
Lethargic encephalitis,	1	0
Poliomyelitis,	1	0
Undulant fever,	1	0
Pellagra,	0	1
Anto fatalities,		4

The "Early Diagnosis" Campaign

For the past four years the month of April has been devoted by tuberculosis associations throughout our great country to an intensive campaign stressing the importance of "early diagnosis" in tuberculosis. In our state, the Maine Public Health Association is the organization which represents the National Tuberculosis Association. This state health agency and its affiliated societies are continually waging active warfare against the "Great White Plague," and during each consecutive April they emphasize to the public the part which "early diagnosis" plays in decreasing the disease.

Just fifty years ago this spring, Dr. Robert Koch, a German doctor, discovered the tubercle bacillus. That discovery revolutionized the entire fight against tuberculosis. As a fitting tribute to Dr. Koch, the campaign this year is carried on under the slogan, "Tuberculosis causes tuberculosis. Every case comes from another." The great question we must ask ourselves is, "*Where is the other case?*"

In this age of enlightenment we know how this disease commences; we know how it is communicated; we know the method of prevention; we know how it can be discovered prior to any outward symptoms. We can truthfully state that "every case comes from another"—from some source of infection in the town, neighborhood or family—and that when we find that "other case" we can eliminate the cause of infection at its source. However, it is quite another thing to put this knowledge into actual practice and bring about this pleasing result. Just as in the human body the "disease often hides behind the disguise of health until it has entrenched itself well enough to show its head, so also in the social body it hides behind fear, pride and indifference to escape those measures which would mean its extinction."

The National Tuberculosis Association and its affiliated organizations in every state, are at work at the present time against these intangible enemies and forces. They have

enlisted the aid and coöperation of physicians, health officers, public health nurses, social workers, and community leaders in a gigantic campaign of education, through which they hope to drive home to every person in the United States the information that "every case comes from another." There are many phases in the tuberculosis program that must be continued—the care of the known case, the general measures for prevention—but it is "most important, most *vital*, to make a special effort in each specific instance of tuberculosis to *find out where it came from*," and thus stop the disease from spreading further. With such a splendid group of efficient and willing helpers endorsing this idea in their varied and respective fields, it would seem possible within the near future to trace every case of tuberculosis to its source, for every case of this disease *has* a source. Very often it will be found in long-continued and close relationship. We all know that the general belief years ago was that the disease "ran in the family" and that it was "inherited." We know now that it does have a tendency to "run in the family," because it is particularly communicable in the family circle. The real danger often lies in some member of the household who is not obviously tuberculous, and yet is expectorating the tubercle bacilli. Occasionally some member of the family, perhaps a grandmother, who has suffered for many years from a chronic cough, may be the source of infection. Perhaps a servant may be found to be tuberculous. These well-nigh hidden cases are the real danger in many households, particularly if there are children in the home.

These unsuspected sources of infection are often very difficult to discover. Careful, tactful, persistent questioning and investigation are often necessary before satisfactory answers are forthcoming from patients or members of the family involved. Many cases are sincere in saying they are wholly unaware of the source of their infection.

Every clue should be followed until all contacts have been located, so that when the source is finally found, the contact may be stopped, preventing further infection.

When a diagnosis of tuberculosis is made, all exposed persons, all members of the household, should be carefully examined for any sign of infection or disease. If there are children under fifteen years of age who show any reaction to the tuberculin test, they should have a chest X-ray, while all those exposed to the disease over that age should be X-rayed. That is the only method whereby the early forms of the disease can be detected.

To-day the modern facilities for finding the unsuspected source of tuberculosis are surer and more infallible than ever before. There is a more general understanding on the part of lay people of the tuberculin test and the X-ray, which means much in and for the "early diagnosis." The public has accepted with willingness the proved scientific facts regarding the disease, and has lost its

unreasoning fear, for the annual campaign has done its bit each year to educate the people along this line. "Now is the time, if ever, to trace every case of tuberculosis to its source."

From January 1st, 1931, to January 1st, 1932, the Maine Public Health Association gave the tuberculin test to 7,524 Maine citizens, a large number of this group being school children. Of this number 1,467 showed some reaction, and had a chest X-ray. Following the X-ray, 322 received chest examinations. These clinics were given in twelve of the sixteen Maine counties, and cases from sixty-eight different communities had this service. During each April the importance of the "early diagnosis" is stressed emphatically, but the actual work is carried on for the full twelve months by this unofficial agency affiliated with the National Tuberculosis Association.

A. H. MCGOULDRIK.
Dixfield, Me.

Social Insurance

By DR. EDWARD H. OCHSNER

Most Governments Are Inefficient or Corrupt—Some Are Both—(Continued)

We come now to what is probably the weakest spot in the government—the judicial interpretation of the laws and their legal administration. Some of the worst features in the administration of criminal justice in particular, in most of the states and sometimes even in the federal courts, result from countless postponements, hair-splitting technicalities, innumerable appeals, and numerous reversals, with its resultant delays and miscarriage of justice. Volumes could be written on this subject alone, but one illustration of each method of delaying justice will have to suffice.

A known gunman has been indicted six times in the last eighteen months. Every time he has been released on bonds he has been involved in new crimes. In spite of

all this, he was given thirty continuances on the first indictment. Commenting on this and many similar cases, Henry Barrett Chamberlin, Operating Director of the Chicago Crime Commission, recently made the following statement:

"Repeated postponements in the trial of a criminal case is the most serious obstacle in obtaining a just verdict."

The following is an illustration of how intense legalism and the glorification of technicalities only too often defeat justice. The case is taken from the decision of the Illinois Supreme Court, Volume 258. This decision was handed down many years ago, but it still stands. An eleven-year old girl was dragged into a basement apartment and mistreated by a fifty-year old man. He was

found guilty and sentenced to the penitentiary for five years. The Supreme Court reversed the sentence, not because of any doubt concerning the defendant's guilt, but because the child's first name had been set forth as Rosetta instead of Rosalia in the indictment.

In most major criminal cases, in nearly all of the states of the Union, the convicted person has three and sometimes even more chances of appeal and one or two chances of executive clemency. Each time he has a chance to find a loophole and to make his escape while society is denied an equal chance to protect itself.

Our laws have been so emasculated by mollicoddle reformers that it is almost impossible to convict a criminal and keep him convicted, or to convict one or a group of men who maladminister government departments. A case in point. Between the years 1915 and 1919, four real estate experts were paid \$2,736,868.00, out of the city treasury. It was common knowledge that the payments were grossly excessive, and that a good deal of this money ultimately found its way into the political fund of the administration, and yet the Supreme Court reversed the verdict of the Circuit Court which had found the defendants guilty, because it claimed that the prosecution had not proven that any member of the administrative body had personally received any of the money. To the laymen the language of the Supreme Court seems to say that if the administrative officer chooses to look in the other direction when the money is being stolen he cannot be held responsible. I do not presume to criticise the courts in these decisions—the fault may be in the laws—but no one will claim that all this spells governmental efficiency, and that is the point under discussion here. In this connection, I wish to quote a jurist, who was known for his outstanding fearlessness and integrity, and his profound knowledge of the law. He characterized the Municipal and Circuit Courts as the Courts of Original Error, the Appellate Courts as the Courts of Interme-

diate Speculation and the Supreme Court as the Court of Ultimate Conjecture.

While most of these illustrations have naturally been taken from Chicago and Illinois, similar instances in many other places prove that conditions are justas bad. We need but refer to the recent dismissal of five judges for gross inefficiency and corruption in New York City, and to an address of Samuel Seabury to the Justices of the Appellate Division of the Supreme Court of New York, in which he said, "It is for you to say whether the magistrates' courts shall be turned into bargain-counters where justice is bought and sold, when political leaders are brokers dealing in influence." In smaller governmental units the corruption and inefficiency is, of course, on a smaller scale, but in many instances it is there just the same. One writer in a popular magazine sizes up the whole situation in the following words: "From Teapot Dome to our latest Municipal Court scandals we have seen enough of political and public malfeasance to believe almost anything of our lawmakers, courts and public guardians."

We have devoted this much space to the discussion of governmental inefficiency because it is fundamental. If we have demonstrated that most governments are inefficient or corrupt, and that some are both, and that there is no likelihood of marked improvement in the immediate future, then we have proven that it would be unwise and unsafe to entrust so vital a function as the almost universal control of medical practice to governmental supervision and control. If one were to record all the evidence of inefficiency and corruption which occur in all the governmental units of this country in one year alone, it would require volumes instead of a few short articles.

The purpose of these articles, however, is not so much to give detailed information as to arouse the allied professions of medicine and dentistry, and through them the general public, to the impending danger.

(The next two articles will show how the quality of medical services deteriorate, under Compulsory Health Insurance.)

Training Schools for Nurses

A nursing school is the source of considerable financial profit to most hospitals. To give up their training schools would mean the yearly loss of fairly large sums of money.

So declare 82% of 208 hospitals, the nursing schools of which have taken part in the cost study of the Committee on the Grading of Nursing Schools. Only 18% believe that they would save money by giving up the schools and substituting graduate nursing care for their patients.

This first cost study of the Grading Committee, rather than producing authoritative results, shows the need of further study, Dr. May Ayres Burgess, director of the committee, declares in presenting the results in the April number of the *American Journal of Nursing*. She believes, however, that further studies will not change greatly the relative proportions of schools that would lose or gain by discontinuing their schools, although the actual amounts of money involved might change considerably.

One-fourth of the schools reported either that they would save money by giving up the schools or would lose less than \$2,500.00. Another fourth estimated that discontinuance of their training schools would bring an annual loss of \$23,350.00 or more. The middle group estimated that it would lose \$10,500.00 yearly by such a move.

Although it has an average of fifty-five patients, one hospital estimated that by closing its nursing school it would save \$209.00 a patient each year. At the other extreme was the estimate of a hospital that it would lose \$525.00 per patient per year were its school given up.

To place hospitals with large schools and with small schools on the same basis for comparison, the hospital was asked how it would replace every ten students. Replacement figures received showed wide variation in the number of graduate nurses and maids thought necessary to supplant the students.

Findings of the Grading Committee challenge the results of the study of nursing education in Canada made by Dr. G. N. Weir.

Dr. Weir's figures seemed to show that nearly all hospitals would save money by giving up their training schools, and that the larger the hospital was the more money it would save.

Several of the largest and most respected nursing schools in the United States made cost studies for the Grading Committee. Their studies were made with great care, and in some cases accounting experts were called in from the outside. Yet in every case the larger hospitals report that they would lose a very large sum by giving up their schools.

"To any thoughtful educator," says Dr. Burgess, "the proposition that a professional school can be a source of considerable financial profit to those who control it seems incredible. All educators would normally take it for granted that schools of nursing which are well run must necessarily be extremely costly. That in nursing the opposite is true is one of those unfortunate facts that only the person of long experience in the field can accept."

Janet M. Geister, R. N., director at headquarters, American Nurses' Association, sees in the situation a challenge to educators, hospital administrators and the public.

"It isn't enough that the nursing profession takes cognizance of these facts," Miss Geister declares. "John R. Public must, too. Nursing care is recognized commonly as an essential in the treatment and prevention of disease and in the promotion of health. When Mr. Public finds his child ill and the doctors diagnose it pneumonia, Mr. Public cries, 'I want the best nurse I can get.' In school Mr. Public had insured for his son a standard quality of teaching through tax-supported or privately-endowed universities and normal schools. He was pretty sure of his doctors. But he has never raised a finger to help obtain aid for nursing schools or to insure himself of good nursing care."

AMERICAN NURSES' ASSOCIATION,
450 Seventh Ave.,
New York City.

Report of the Necrologist for 1931-1932

Our older men continue to drop from the ranks and we have a narrow outlook for younger men to take their vacant places. During the past year we have missed the men mentioned below and suitable necrologies concerning them have been printed in our JOURNAL.

Mark Alward, Portland.

Eugene Hersey Andrews, Brunswick.

Franklin E. Clark, Portland.

Leander Dascombe, Skowhegan.

Thomas James Fitzmaurice, Lewiston.

Erastus Eugene Holt, Portland.

Stillman Johnston, Vanceboro.

Eugene Libby, Portland.

Loring Sawyer Lombard, South Portland.

Warren Gray Sawyer, Madison.

John W. Schafer, South Berwick.

Charles Asbury Stephens, Norway.

George Brooks Swasey, Portland.

Isaac Henry Wight, Bethel.

It is hoped that every living member will make some record of his medical life to go toward the medical history of Maine.

JAMES A. SPALDING,
Necrologist.

Necrology

William Stephenson, U. S. A. Medical Staff, 1855-1932

A native of Portland, a student at Bowdoin, and a surgeon of the highest rank in the U. S. Army Medical Staff, William Stephenson, who died in New York in April of this year, deserves mention in the JOURNAL of our Association. He was a reserved and quiet man who left very little to the medical literature of our nation which might show his efficient services. It is very fitting that we should say a few words concerning his worthy career.

After an incomplete college course at

Bowdoin, he studied medicine in Maine and obtained his medical degree at Columbia in 1880. Returning to Portland for practice and study, and following this with post-graduate work in New York, his mind turned to army practice, and, passing an ex-



DR. STEPHENSON

cellent examination, he was appointed Lieutenant and Assistant Surgeon in 1883, and was gradually promoted to the highest rank, that of Colonel. He served in Cuba, Porto Rico, the Philippines, and Chicago, and was retired in 1907 while in command at the Post Hospital on Governor's Island, New York.

He wrote but little that can be retrieved from medical literature, but he spoke well at medical meetings. His record as an officer and surgeon was of the highest. "Reliable in emergencies" was his motto through life.

Colonel Stephenson leaves a widow, two sisters and a brother. He is a man who will long be remembered by those who knew him.

J. A. S.



Dr. George B. Swasey

In the fall of 1873 and winter of 1874, four men sat on the front seat of the lecture room of the old P. and S. Medical School in New York. These students all came from different towns in New England, all were strangers to each other before entrance, but after graduation all settled down in Portland, Me. Here they spent their lives in the practice of medicine, and here they came to be close friends. Each man was prominent in the state and city in different departments of his profession. These men were Dr. Charles W. Bray, Dr. George Cummings, Dr. George B. Swasey, and the writer. Three of them have passed on, leaving well-remembered names in our city.

Dr. Swasey came of sterling native stock, of a long line of physicians, a father and a brother, and several uncles. I knew him for many years as a friend, a careful, conscientious associate. He was of a rather retiring disposition, slow to accept new and untried theories, but once accepted he was tenacious and reluctant to exchange them for others. He rarely put his experience in writing, but was a ready speaker in professional meetings. He was trusted as a family

physician by his patients, and leaves a large circle of friends, who will regret his loss.

He was for many years a deacon in the State Street Church of this city, and was always ready to further its interests. He was one of the physicians to whom were given the memorial medals at the last meeting of the State Medical Association for having practiced his profession for half a century.

Again there has left us one of the old-time doctors. Alas, their number is growing less and less as the years roll by.

STANLEY PERKINS WARREN.

Correspondence

To the Editor:

The paper on "Treatment of Cancer of the Uterus," cervical and corporeal types, by our colleague, Adam P. Leighton, Jr., JOURNAL OF THE MAINE MEDICAL ASSOCIATION, Vol. XXIII, No. 4, deserves our closest attention. Sanity, and what is what, as regards that dread condition, cervical malignancy, is presented by one who carries a message of hope. As seen by the surgeon, cervical cancers are, in the vast majority of cases, beyond chance of cure by surgical interference. One may reasonably say that surgery is contraindicated, for the disease has advanced far beyond the cervix proper and has invaded the vaginal vault below and the corresponding tissues within the pelvis. As truly said by Dr. Leighton, surgery at this time removes only the gross mass. We leave behind the most important part of the disease, the suspension of cancer cells in the lymph vessels around the growth; that is, we leave them if we are in luck, but the effect of operation at this time, if the patient escapes the primary operative mortality, which is very heavy if the operation is as radical as it should be, results in a breaking down of these lymphatic barriers and further spread of the disease. The operation, as performed along radical lines, is a task of major magnitude, fraught with great danger technically, and with an end result far from commensurate with the risk and danger run. Some may say that the

patient is going to die, anyway. True as can be, but the end should not be hastened by ill-advised surgery—ill-advised, for the picture has changed in the past few years. Men who have at their disposal the proper amount of radium, and who have learned *how* to employ it, have shown the fallacy and utter futility of attempted cure by surgery alone. True it is that we now and then get a patient with a suspicious lesion of the cervix that is cured by radical operation, the report often being that the cells are suggestive in behavior to "border line malignancy."

The duty of the profession, general practitioners, and also surgeons, must go on the basis that symptoms in a woman suggestive of uterine malignancy are a fact until the contrary is a positive assurance. The surgery of these women, as we see them, is the surgery that repairs or removes those conditions which precede cancer. The careless dismissal of these patients, with the assurance that it is "probably" the change of the menopause, with a prescription for some ergot and to take douches, has no place in these days.

Neither Dr. Leighton, nor any other man, is going to be able to come before us in five years and give us concrete and practical facts regarding this disease unless he has a sufficient amount of material to base opinions upon. Rank and file, we see comparatively few cases of cervical malignancy in the run of a year; our aggregate material is considerable, and, what is appalling, it is increasing. We owe it to ourselves, to our patients and to one who has prepared himself for the work to loyally aid and co-operate. It is a type of highly specialized work, and we should avail ourselves of the opportunity to place every case possible to help in such hands. The benefit will accrue to these unfortunate patients, Dr. Leighton will gain a most valuable and helpful experience which he will extend to us, and further light be shed on this hideous affliction. So many times this story, "Why did you wait until this condition became so terrible before seeking advice?" "I was afraid, Doctor, that it was cancer, and I know there is no cure for that." Pitiful and mostly true.

FRANK H. JACKSON,
Houlton, Maine.

Nursing

As the recently appointed President of the National League of Nursing Education, an article entitled "Nurses or Near Doctors—Which?" printed in the February number of the MAINE MEDICAL JOURNAL, has been brought to my attention. I have read it with a great deal of interest and with not a little thought as to the motive which prompted the writing of so destructive an article aimed against a group of co-operative workers.

Nursing education needs no defense from nurses. It is, therefore, not my purpose to refer in detail to the opinions expressed in this article, nor to discuss the course of study to which it refers in relation either to its subject matter content or to the number of hours which should be given to each subject. It is very well known that many groups of thoughtful men and women have in the past, and are at the present time, giving serious attention to the study of nursing education, in order that nurses may be prepared to function in the very highest and best capacity as nurses, not only in the hospital, but in the community in the many and varied fields which are calling for their assistance.

One obviously has a purpose in presenting an article for print, and no doubt the author of this article had a purpose which, perhaps, may be related to his own personal experience or to that of others with whom he is associated. Such experience, however, we are happy to say is not a universal experience, for there are many members of the medical profession, as well as those who need nurses in the world outside, who hold an altogether different point of view and who see nursing in quite a different way. Constructive suggestions are always of value and are to be desired in any field of education. Nursing owes a great deal to the helpful support and suggestions it has often received from members of the medical profession.

Dr. Wm. Welch, the great authority on medical education, has described nursing as a profession distinct from that of the practice of medicine but intertwined with it. He emphasized the fact that the doctor must learn to recognize the nurse as an expert in a profession related, but entirely apart, from that of medicine. This implies a body of knowl-

edge concerned with nursing alone. He further expressed the opinion that nurses could not be overeducated and that it was not possible for a nurse to know too much or be too highly qualified on the practical, scientific and intellectual side of her profession.

As one of the aims of nursing education is to provide for the safety of the patient, it is obvious that the quality of that education is of first importance. Inasmuch as nurses are held judicially responsible for their own acts in the practice of nursing, it is fundamentally important that they should be well-informed. Ignorance provides no valid excuse in law for errors which may occur in the performance of duty in any field of work in which one is licensed to practice. Obviously, therefore, in considering the welfare of patients, it is incumbent upon those who are in any way responsible for the education of nurses to provide that something more than the minimum amount of knowledge is placed at their disposal, and also that it is not grafted upon "immature and undeveloped minds."

Dean Winternitz, of the Yale School of Medicine, who has given much thought to the education of nurses, says: "I believe it essential to you to develop your own educational policies and to foster, as occasion arises, your own opportunities."

In closing, may I say that the conception that the aim of nurse educators is to make "near doctors" does not exist with them. The aim of nursing education is to make intelligent nurses, capable and safe in coping with the nursing problems associated with health and disease. The solution of problems in the varied fields in which they are found requires a comprehensive understanding of many subjects, conditions and situations which we are only beginning to interpret in their relation to the happiness and welfare of healthy human beings.

EFFIE J. TAYLOR,
*President National League of
Nursing Education.*

County News and Notes

Androscoggin

The regular meeting of the Androscoggin County Medical Society was held Friday, April 22, 1932, at 8.00 P. M., at the Marcotte Home, Lewiston.

After a brief business meeting, Dr. Frederick T. Hill gave an illustrated talk upon "Oesophagoscopy and Bronchoscopy," and Dr. Robert J. Wiseman, Jr., spoke on "Vital Statistics—Lewiston Health Department."

J. GOTTLIEB,
Secretary.

Cumberland

The Cumberland Medical Association will hold the last meeting of the season Friday, May 27th, at the Eastland Hotel, Portland, at 6.45 P. M. Dr. Herman Pitts, of Providence, will speak on "Uterine Cancer."

Knox

The Knox County Medical Society met Tuesday, April 19, 1932, at the Thorndike Hotel, Rockland.

Dinner was served at 6.30, after which Dr. E. L. Drake spoke on "Cardiac Pain."

F. F. BROWN,
Secretary.

Oxford

The annual meeting of the Oxford County Medical Association was held at the Bethel Inn, Bethel, May 9th.

The President was asked, through the suggestion of the President of the Maine Medical Association, by the Vice President of the Woman's Auxiliary to the American Medical Association, to appoint the wife of one of the members to represent Oxford County at a meeting in conjunction with the Maine Medical Association meeting in June, to re-organize the Woman's Auxiliary. Mrs. J. S. Sturtevant, of Dixfield, was appointed a delegate for that purpose.

The following officers were elected:

President—Dr. H. A. Moody, of Rumford.

Vice President—Dr. R. E. Hubbard, of Waterford.

Secretary and Treasurer—Dr. J. S. Sturtevant, of Dixfield.

After the business meeting, the physicians proceeded to the dining room, where they were joined by the ladies. After the dinner, James M. Sturtevant, A. B., M. D., of New York City, gave a talk on "Congenital Malformations of Infancy," with lantern slides from X-ray pictures.

The following members were present, with ladies: Dr. D. W. Stewart, Dr. Edwin Kay, of South Paris; Dr. J. S. Sturtevant, of Dixfield; Dr. J. W. Staples, Dr. C. W. Nelson, of Norway; Dr. L. A. MacDougall, Dr. E. M. McCarty, Dr. H. L. Noyes, Dr. M. J. Brooks, Dr. J. A. Nile, Dr. H. M. Howard, Dr. H. W. Stanwood, of Rumford; Dr. R. R. Tibbetts, of Bethel.

The following guests were present, with ladies: Dr. J. M. Sturtevant, of New York City; Dr. W. E.

Storey, of Boston, Mass.; Dr. Owen Smith, Dr. C. B. Sylvester, of Portland; Dr. W. W. Bolster, Dr. W. E. Webber, Dr. R. L. Mitchell, of Lewiston; Dr. C. F. Kendall, of Augusta; Dr. A. F. DeMilia, of Lovell.

J. S. STURTEVANT,
Secretary.

Penobscot

The annual "Spring Clinic" of the staff of the Eastern Maine General Hospital was held April 20 and 21.

The discussions were conducted by Dr. Henry A. Christian, of the Peter B. Brigham Hospital, of Boston, and by Dr. Richard H. Miller, of the Massachusetts General Hospital.

At 7.00 P. M., on Wednesday, April 20, an informal dinner was served at the Penobscot Valley Country Club, following which Dr. Christian spoke on "The Pharmacology of Digitalis in Relation to the Therapy of Heart Disease."

On Thursday evening, at 8.00 o'clock, the Penobscot County Medical Society held its regular meeting at the nurses' residence of the hospital. Dr. Miller spoke on "The Present Status of Gastric and Duodenal Ulcer."

The Penobscot County Association held its last meeting of the year Tuesday, May 17th. Dr. Francis M. Rackeman spoke upon "Asthma and Hay Fever."

Sagadahoc

The annual meeting of the Sagadahoc Medical Society was held May 18th, at Bath.

Members present: Dr. E. M. Fuller, Dr. A. F. Williams, Dr. H. S. Stilphen, Dr. E. F. Pratt, Dr. A. A. Stott, Dr. H. D. Grant, Dr. L. T. Snipe, Dr. W. E. Kershner and Dr. P. W. Davis, Secretary of the State Society.

Out of respect to the memory of our late President, Dr. B. F. Barker, the usual dinner was omitted and only routine business transacted.

The following officers were elected for the ensuing year:

President—Dr. H. S. Stilphen.

Vice-President—Dr. A. A. Stott.

Secretary and Treasurer—Dr. W. E. Kershner.

Executive Committee and Censors—Dr. D. S. Day, Dr. E. M. Fuller and Dr. H. D. Grant.

Delegate to the State Association—Dr. E. F. Pratt.

Committee on Resolutions for Dr. Barker's death—Dr. A. A. Stott, Dr. A. F. Williams and Dr. Grant.

Dr. Eben Marston was elected honorary member of the society.

Dr. Jos. I. Smith was elected to active membership in the society.

The Secretary of the State Association gave a short résumé of his visit to the American Medical Association at New Orleans and explained in detail some of the less understood activities of the State Association.

Meeting adjourned.

W. E. KERSHNER, Secretary.

Franklin

A Medical Institute (4th) was held at the hospital Monday, May 23rd.

During the afternoon Dr. Lahey, of Boston, examined and discussed selected cases of gall bladder and thyroid disease. In the evening he spoke on "Gall Bladder Disease." He made an emphatic and logical plea for an earlier diagnosis of gallstones and operative interference before repeated attacks of colic and cholecystitis, the presence of stones in the common duct, etc., place the patient in a class where the end results are poor and the mortality unnecessarily high.

Notices

Nominations for the fourth award of the Saunders Medal bestowed annually on a distinguished American nurse are now being received at national headquarters of the American Nurses' Association, 450 Seventh Avenue, New York, according to an announcement by Miss Janet M. Geister, R. N., director.

The Saunders Medal is awarded one of the 109,000 members of the American Nurses' Association "who has made to the profession or to the public some outstanding contribution either in personal service or in the discovery of some nursing technic that may be to the advantage of the patient or the profession. The only kind of service excluded is that of writing."

A name may be submitted either directly or through a state association of nurses; it must be accompanied by the address and official position of the candidate. The sponsors must also send a complete statement of the professional background and accomplishments of their candidate, together with a statement of the achievement on which the award is to be based.

News

Artificial Pneumothorax Clinic As an Aid in Relieving Long Waiting List of Sanatoriums of the State

With the sanatoriums of the State running to their fullest capacity, and with a waiting list that means

several months between application and admission, any procedure that would tend to relieve this situation, even in a small way, is commendable. Such a step was taken one and one-half years ago when Dr. Francis J. Welch instituted a division of collapse therapy in his chest clinic at the Out-patient Department of the Maine General Hospital (Portland City Dispensary).

This places Portland in a position comparable to the few metropolitan chest centers where the indigent may receive ambulatory artificial pneumothorax treatment.

How this department aids in the relief of the sanatoriums that draw from the Portland district is as follows :

(a) There are, in all probability, a few artificial pneumothorax patients taking up beds in the sanatoriums who live in Portland or vicinity whose only reason for being institutionalized is to obtain the air refills so necessary for maintaining collapse. These could easily get their refills at the clinic and live at home. We have had several such patients and are equipped to handle more.

(b) The average waiting time between application and admission is over six months. Those with minimal or favorable moderately advanced tuberculosis who do well with only rest treatment can, of course, carry out a regimen of rest at home while waiting for admission. But what about the well-advanced case that is getting progressively worse even with rest, fresh air and good food, in whom collapse therapy is strongly indicated to arrest progression of the disease? Waiting six or seven months jeopardizes a happy outcome in many cases. Here, again, the clinic can do good work. It has been the writer's privilege to arrest the progress of the disease in four patients waiting for sanatorium admission. Two of these patients were in bed and the machine was brought to them for artificial pneumothorax induction. These patients improved enough (fever subsided, cough and expectoration lessened, weight gained, etc.) to become ambulatory cases at the dispensary after a month.

EDWARD ALFRED GRECO, M. D.,

Physician, Chest Clinic, Out-patient Department,
Maine General Hospital.

Cook County Hospital Summer Clinics

The regular Summer Clinics given by the staff of Cook County Hospital, under the auspices of the Chicago Medical Society, will be held during the weeks of June 6 to June 18, inclusive.

As customary in time past, the usual \$10.00 registration fee will be charged to cover the expense of organization.

P. H. KREUSCHER, Chairman,
Summer Clinic Committee.

Reunion, Class 1907

The class of 1907, Bowdoin Medical School, will celebrate the twenty-fifth anniversary of its graduation by a reunion, to be held at Rangeley on June 18, at the time of the Maine Medical Association meeting. Of the sixteen who graduated in this class, fifteen are now living, and all but two are practicing in Maine. Eleven members have already signified their intention to be present at the reunion, and it is hoped that the other four will be able to attend.

This idea of class reunions, held in conjunction with the meetings of the state association, seems to be worthy of emulation by other classes, affording, as it does, an opportunity to "kill two birds with one stone," by attending the scientific sessions of the association and at the same time renewing acquaintance with one's classmates, with a minimum expenditure of time away from home.

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Necrologist

JAMES A. SPALDING 627 Congress St., Portland

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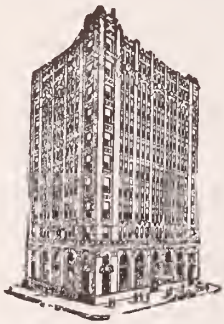
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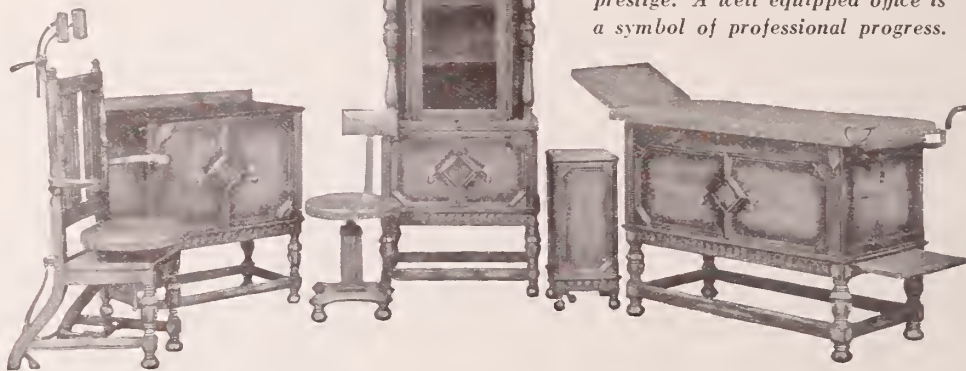
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Maine Medical Journal

The Official Organ of

The State and County Medical Societies

Vol. XXIII

Portland, Maine, June, 1932

No. 6

Editorial

In this number of the JOURNAL will be found the report of the Secretary-Treasurer, reports of the District Councilors, together with reports of the Committee on Hospitals and Medical Education and Scientific Committee.

All arrangements for the annual meeting at Rangeley have been completed, and we urge every member to make a special effort to attend.

The books of the Association have been audited by Jordan & Jordan, and a summary of this audit will be published in a subsequent issue of the JOURNAL.

Do not stay away because you have failed to secure reservations at the Rangeley Lake House. Good rooms, good food and fair prices are to be had at the Tavern near by, and a number of camps afford just the accommodations you require for your comfort. A week-end long to be remembered will be yours. Bring your programs with you.

Report of the Secretary-Treasurer

The Association year just ended has been rather an uneventful one. The Council and Officers have met a number of times in

formal session and several subjects have been acted upon directly or referred to appropriate committees for consideration and presentation at the annual meeting in June.

A preliminary report from the Committee on Public Relations was submitted in February on the subject of the Status of Medical Examiners in Maine, the gist of which was that there is room for improvement. A more detailed report is expected from the committee at the annual session, with recommendations for the improvement of this public service.

A meeting was held in Augusta, at which representatives of the Maine Public Health Association, the State Health Department, and Dr. Hanscom, Director of Institutions, were present. This meeting was for the purpose of discussing ways and means to secure closer co-operation between these groups, in order to improve and make more effective certain phases of the clinics sponsored by the Maine Public Health Association (the taking and reading of X-ray films from the chest clinics, by whom and where this work should be done, etc., was fully discussed).

The work of your Secretary has been made easier and more efficient by the gener-

ous and active co-operation of the various County Secretaries, whose prompt replies to letters and frequent notices of meetings, etc., have been a source of satisfaction and real help.

In spite of the fact that we are in the midst of the most serious business depression and financial crisis in history, the affairs of the Association are in good order. It seems to have been "good business" to have reduced the dues. In spite of the \$2.00 reduction, our balance on hand June 1st this year of \$6,262.47 is only \$174.51 less than of same date last year. Our total receipts were \$473.09 less than last year, and our expenditures \$298.58 less. The total active membership of the Association is 695, honorary members, 24. Eighteen new members were added this year. There were fourteen deaths.

At this time, and the times being what they are, believing that we are carrying a larger amount in our checking account than is needed to meet current expenses, a further reduction of the dues this year is recommended, with the suggestion that your Treasurer be allowed to draw on our savings account should occasion arise for extraordinary expenditure in the course of the year.

PHILIP W. DAVIS,
Secretary-Treasurer.

Report of the Committee on Medical Education and Hospitals for 1932

For the past two years, your committee has made certain recommendations in reference to a better and more up-to-date method of training nurses. About eighteen months ago a committee representing the medical, nursing and teaching professions was investigating the feasibility of a pre-nursing course at the University of Maine. We are now pleased to report that in response to the request of that committee representing the nursing training interests in the state, the Extension Department of the University of Maine has issued, in part, the following bulletin under date of Jan. 8, 1932:

"The University of Maine will open for registration in September, 1932, a one-year special course designed to meet the needs of nursing training. This course *will not be given if less than fourteen students register.* The work will be handled at the University through the Extension Service of the College of Arts and Sciences at the usual extension rates and will cost each student \$153.00 per year as compared with \$150.00 for straight tuition. The curriculum is planned as follows:

First Semester	Credit Hours
Anatomy and physiology,	4
Chemistry,	4
Bacteriology,	4
English,	3
Personal hygiene,	1
Physical training,	0
	—
	16
Second Semester	Credit Hours
Anatomy and physiology,	4
Dietetics,	3
Psychology,	3
English,	3
Sociology,	3
History of nursing,	1
Physical training,	0
	—
	17

"This course complete will furnish 33 semester hours of University credit. If further work is contemplated leading to a degree in the College of Arts and Sciences, certain additional requirements of distribution will have to be met.

"In this curriculum provision is made for three groups of students: (a) Those graduates of accredited high schools in the State of Maine who can fulfill the complete requirements for admission to the College of Arts and Sciences; these students will receive full academic credit for the course completed and this credit may be counted toward the requirements for a bachelor's degree. (b) Students presenting entrance credits deficient in the modern language requirement only; such students may enroll in the special course but may not be candidates for a degree until their entrance deficiency is removed; they will receive certifi-

ation for completed work, however, which will provide for advanced standing in the Hospital School. (c) A third group may be made of students matriculated in a Hospital School and sent by the school to the University for this course, thereby obligating their return to that particular school."

Students who have completed this course could be granted from six to nine calendar months' time credit by the hospitals for this curriculum toward their three-year training course and full credit for each subject listed. In fact, one of the three largest hospitals in the state has already agreed to grant six months' credit to its students for this course.

At the present time there also appears to be an oversupply of graduate nurses and your committee feels that the above suggested course of training will have a tendency to produce the following results: First, it will relieve the various hospital training schools of the burden of instruction in the basic sciences and laboratory courses; second, the pupil nurses will be more efficiently trained in the basic sciences and therefore will be better prepared to take up the bedside nursing work in the hospital more understandingly; third, the course will have a tendency to raise the nursing standards; fourth, it will have a tendency to eliminate and prevent deficient and unqualified students from entering the nursing profession. In connection with the last point we wish to quote you from Dr. May Ayers Burgess' article in March number of the *American Journal of Nursing*. Dr. Burgess says, "If nursing is to avoid disaster, the steady production of more students, who became graduates, must cease. It must cease not only in the small schools, but in most of the large schools as well."

Your committee, therefore, recommends that the pre-nursing course as offered by the University of Maine be approved by this Association.

Another important matter which your committee again wishes to bring to your attention is the care and treatment of acute mental cases in general hospitals and commitment of such patients to the state hospitals. The great majority of physicians in this state complain bitterly over the time-

consuming legal formalities necessary before mental patients can be put under proper treatment in any hospital. Last year your committee reported this matter and made certain recommendations. We again offer the same suggestions, because we believe that this is a very important matter which should be considered by this Association. We would recommend that a committee be appointed at this meeting for the purpose of studying further into this question, and that the committee, after having made a careful survey of the whole subject of temporary treatment of acute mental patients in general hospitals and commitment to state hospitals, make such recommendations to the next Legislature as may be necessary to have laws passed that will permit hospitalization of mental patients without unnecessary and harmful delay.

Your committee respectfully submits the above suggestions and recommendations. Further discussion of these very important subjects, in order to solve them to the best interest of the community, is highly desirable.

Respectfully submitted,

CARL J. HEDIN, M. D.,

EDW. H. RISLEY, M. D.,

JOHN F. SHAW,

*Committee on Medical Education
and Hospitals.*

Report of Scientific Committee

As chairman of the Scientific Committee, I beg leave to submit the following report.

The program for the 1932 meeting has been prepared. It is hoped that this will prove satisfactory to a majority of the members. Several changes have been incorporated. The time of the meeting has been extended to two and one-half days, allowing for five sessions. The conference system, allowing for numerous small groups to meet in round-table discussions, has been adopted for the first two morning sessions. These should be of an instructional character and should cover a sufficient variety of subjects to interest all the membership.

The papers have been carefully chosen, giving a variety of subjects and with geographical distribution of the readers. Only three readers are, by invitation, from outside our membership, and these are of a research character. An abstract of each paper has been printed in the program to facilitate discussion.

An attempt has been made to start a scientific exhibit. This has possibilities of value if properly encouraged.

RECOMMENDATIONS

I would recommend the continuance in the future of the conference system. As time goes on, and it becomes better understood, it should prove a valuable feature and make for added interest, as well as prove of value to the members. As it is developed, it will be possible to distribute the leaderships of the various conferences more widely. Lack of time and limitation of the personal acquaintanceship of the chairman was a handicap in this respect.

I would also recommend the printing of abstracts of the papers in the program.

I would recommend the continuance and further encouragement of the scientific exhibit.

If this type of program is to be continued, I would recommend changing the By-laws, so that the Scientific Committee would consist of four members in addition to the Executive Secretary. This will allow for a longer apprenticeship, necessary in order to efficiently arrange for the complicated conference system. It is suggested that two men be responsible for the conferences and two for the papers, with the Secretary coordinating these activities. Geographical location should have no place in the selection of members of the committee. They should be men especially interested in this phase of our profession.

In order to encourage original work among our members and facilitate the employment of our own speakers on programs of the county societies, I would recommend the Executive Secretary have a list of avail-

able speakers, with subjects, kept up to date, for the use of the county societies in making up programs. This would, in effect, be an "exchange system."

The welfare of both the state association and the county societies depends to a large extent upon the high character of the programs presented at meetings. In addition to being instructional, they should be such as to encourage discussion and the production of original work on the part of our own members.

Respectfully submitted,

FREDERICK T. HILL.

Report of Councilor, First District

As Councilor for the First District, comprising the counties of Cumberland and York, I have the honor to submit the following statement of the activities of these societies for the past year.

Much credit is due the capable secretaries, Doctors Holt and Kinghorn, for the quality of their programs, and also to that portion of the membership which supported their officers by their attendance.

By way of comment, however, it may not be inopportune to suggest that nothing so disheartens an energetic Secretary as the morbid inertia displayed by some club members.

The subjects presented before these societies during the year were varied, interesting, instructive, and timely.

Dr. Kinghorn is to be complimented for having invited Doctors Gotthieb and Higgins, of the Androscoggin Society, to address his men in the beautiful Sanford Hospital, an innovation which not only welds the component county societies of our State Association into a closer union, but makes for true growth on the part of those of our members who accept such invitations.

Finally, the custom of inviting all members of the State Association to attend the meetings of the Cumberland County Society was again followed this year. The large response to their invitation is ample evidence

that this courtesy on the part of our President and Secretary is appreciated.

Respectfully submitted,

E. W. GEHRING,
Councilor.

On the whole, I believe the Fifth District to be in a healthy and prosperous condition.

RALPH W. WAKEFIELD,
Councilor.

Report of Councilor, Third District

As Councilor for the Third District, I have the honor to report that the Sagadahoc County Society is in the same healthy condition as when last reported. Your Councilor visited the Knox County Society with the President of the State Association and found them in a flourishing condition, with healthy interest in the meetings and using every effort to secure able and timely speakers.

There have been no problems in either county society which have not been handled by the local officers.

Respectfully submitted,

W. E. KERSHNER,
Councilor.

Report of Councilor, Fifth District

As Councilor of the Fifth District, I herewith submit the following report:

WASHINGTON COUNTY

The Washington County Medical Society held three meetings during the year, as is its custom, and all of the meetings were well attended, and interesting programs presented.

I believe the society is in a prosperous condition.

Its membership is about the same as last year.

HANCOCK COUNTY

The Hancock County Medical Society held five meetings during the year. I attended all the meetings and considered them all successful. The membership is the same as last year, viz., one member lost by death and one new member added.

Report of Councilor, Sixth District

Reporting as Councilor for the Sixth District, I would say that Piscataquis County has not had a meeting since the meeting at Greenville.

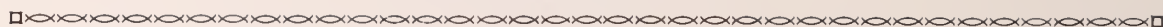
Aroostook has the annual meeting in June, which I plan to attend. They have one addition to the society, Dr. Clyde Swett, who took the late Dr. Banton's place in Island Falls. There have been no deaths or removals, as I am advised by the Secretary, Dr. Whitney.

Penobscot has been holding the regular monthly meetings. This past year we have been holding a clinic at the Eastern Maine General Hospital in conjunction with the meetings. The attendance is good.

Sincerely yours,

J. L. JOHNSON, M. D.,
Councilor.

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THE ANNUAL SESSION



*Treatment of Deafness

By FREDERICK T. HILL, M. D., Waterville, Maine

The treatment of deafness is not a very satisfactory subject to discuss. It is perhaps one of the most discouraging chapters in the story of otology. So little has been accomplished in direct attack upon deafness itself, except for these cases of temporary impairment, such as obstructions in the external auditory meatus, acute infections of the middle ear and mastoid, or inflammatory conditions of the Eustachian tube. Deafness itself is but a symptom, and too often is due to some degeneration or loss of function of the special sense of hearing. For this reason it is better to consider the treatment of the causes of deafness. By so doing one may arrive at a more hopeful therapy.

Except for the temporary forms of deafness mentioned above, the treatment of deafness itself is, for the most part, palliative or rehabilitative. Cases with permanent hearing impairment may be assisted so that they are better able to cope with this disability. They should be carefully advised regarding their occupations, habits and modes of life. They should be put in the best possible general physical condition, and the assistance of the internist is of prime importance in this connection. Many of them are made worse by tendencies to repeated head colds, exacerbations of tonsillitis or sinusitis, and, if performed to remedy these conditions, *per se*, surgical measures on the nose or throat may be justified. Cases in which instruction in speech reading, or where the use of an artificial aid for hearing might be beneficial, should be assisted and advised how to obtain the same.

Incidentally, it has been my experience that it is usually difficult to interest the average adult who has become gradually hard of hearing in speech reading. Parents will readily assent to their children taking this up, and adults who may become quite suddenly deafened will grasp at the opportunity, as one case I recall, following a skull fracture. But, except for these, a large percent-

age seem loath to devote the time and study necessary to acquire this art, which would be of such benefit to them. Corrective treatment by means of artificial aids is as yet far from satisfactory to most patients, although here, again, the inertia of the patient is perhaps the biggest factor. Further development of such apparatus should make this a more efficient form of treatment, so that the otologist might correct auditory errors, as the ophthalmologist does visual ones, by use of lenses.

The importance of prevention has been stressed so frequently that it is hardly necessary to mention it in this discussion. For the most part, all forms of treatment are preventive. Even when improvement is obtained, following the elimination of some proven cause of deafness, our main thought and aim throughout was the prevention of further impairment. Any improvement, therefore, is like a dividend, although perhaps not quite so rare in these days of the great depression. While there has been some disagreement regarding the part played by infections of the upper respiratory tract in children in the development of adult deafness, hardly anyone will deny the importance of early attention to these conditions. This doubt has been raised in those cases of tubo-tympanic infections of childhood, and while possibly the final solution is yet to be determined, with all deference to those expressing this doubt, many of us feel that there is much evidence in favor of these conditions being etiological factors in impaired hearing later in life. When one can demonstrate such a case in a child showing a marked drop in the upper tonal range, indicating impairment of nerve function, rather than merely obstruction to conduction, and see this clear up after correction of the nasopharyngeal cause, one must feel that there is some connection between these conditions of childhood and the hearing defects of later life. The treatment of defective hearing due to active suppuration of the

* Read before the meeting of Eastern Zone, American Federation of Organizations for the Hard of Hearing, Worcester, Mass., May 14, 1932—Symposium on Deafness.

middle ear and mastoid, either acute or chronic, is, of course, the treatment of the suppuration. The earlier and more satisfactorily this is carried out, the better the hearing result will be. The importance of conserving hearing in the case of persistent otitis media by means of mastoid surgery, preventing further destruction of the middle ear, is recognized by all otologists. Local treatment of the ear, of the nose, throat and paranasal sinuses, surgical measures in this field when indicated, and such general therapy as may be necessary to increase the patient's resistance, all may assist in bringing the suppurative process to an end and prevent further hearing loss. After this is attained, the case should be carefully checked up in regard to hearing. Usually some slight treatment of the Eustachian tube, by means of the catheter or bougie, will improve the hearing considerably in the acute case. In the chronic case, of course, impaired hearing, depending upon the amount of destruction, must be expected.

Those cases of impaired hearing due to causes other than suppuration, or to acute catarrhal processes, present perhaps the greatest problem, and one very apt to extend beyond the field of otology. Remembering that deafness is a symptom, we must endeavor to discover its cause. This may be found in the upper respiratory tract, paranasal sinuses, nasopharynx, tonsils, teeth, etc., or it may be quite remote in location. Diagnosis, not only of the otological defect, but of the causative agent, if possible, is the most important factor in determining treatment. This demands a careful, painstaking history and examination, including thorough functional tests of hearing, often repeated. Especial attention should be paid to the testing of the upper limits of hearing, something which is too often neglected. The monochord is a most valuable instrument and should be more routinely employed. In my opinion it is superior to any of the various whistles. Having determined the type and extent of hearing impairment, the next step is to seek the cause. When this is determined the line of treatment may be indicated. In this work we will usually need the assistance of consultants and laboratory facilities. The internist,

roentgenologist, dentist, ophthalmologist and neurologist, as well as the clinical pathologist, may perhaps contribute more of real benefit than the otologist. We may well make a diagnosis of either conduction type, or nerve deafness, of a certain degree, and may ascribe a nasopharyngeal cause to it, but further study will be needed to consider the possibility of some blood dyscrasia, endocrine dysfunction, brain tumor, or lues being a factor. I fear that one of the greatest mistakes that may be charged against otologists is the habit of assuming the cause of this deafness to be easily accessible in the adjacent regions of the nose or throat.

Considering what we call, for want of a better term, chronic progressive deafness, we usually face a condition requiring the maximum of coöperation. What the direct sequence of events is in the production of the resulting dysfunction is still an unsolved problem. When this becomes known, then real progress may be possible. Recent interest in the microscopic study of the living cell in contradistinction to that of prepared and stained specimens seems likely to point the way. Mosher¹ has said that this may lead to the discovery of the cause of chronic infection of mucous membrane, and that when this is accomplished the problem of chronic progressive deafness will be solved. Until this occurs we must proceed by carefully evaluating all the various possible sources of trouble.

Fowler² has demonstrated the frequency of paranasal sinus pathology causing impairment of hearing. Berry³ has emphasized the important part played by apical infections of the teeth. Drury^{4,5} has shown the effect of endocrine dysfunction upon hearing, and more recently has described the hepatic syndrome due to toxemia arising from disarrangement of the liver chemistry. Gottlieb⁶ has called attention to deafness due to pancreatic insufficiency. Any of these, and many more conditions, may be at fault causing deafness. The auditory nerve does not appear to be very resistant to toxins arising from any source in the body. The best endeavors of a group of well-trained consultants, conversant with the problem, may be necessary before intelligent treatment may be instituted. One must guard against seeing what one is espe-

cially interested in, to the exclusion of other possibilities.

Treatment of the cause of deafness covers a tremendous field, and for the most part is apt to be other than otological. We may carry it on in our dual role of otolaryngologists by eliminating foci in the tonsils, adenoids, or paranasal sinuses, but caution must be exercised that we do not allow our laryngological enthusiasm make us see too much in this region and ignore what may actually be more important possibilities elsewhere. Diathermic attack on the lymphoid tissue in the fossæ of Rosenmüller, about the orifices of the Eustachian tubes, as described by Hurd, may be indicated. Of late years there has been a tendency to discountenance treatments of the Eustachian tube by means of the catheter and bougie, which were, in all probability, too indiscriminately employed formerly. Some men have said that they never use a catheter now except for diagnosis. Now this is apt to be a mistake, for there are a number of cases which show very definite lesions of the Eustachian tube and which may be considerably improved by treatment, if properly and conscientiously carried out. Yankauer has recently brought out instruments for dilating the nasopharyngeal orifices of the tubes, which, in some small number of cases, may be useful. But beyond these steps, treatment is usually better carried out by workers in other fields of medicine. We may attempt to regulate by biochemical attack the behavior of the upper respiratory tract, so as to benefit the function of the auditory apparatus, as advocated by the late Dr. Stucky, and now so ably carried on by Lewis, Jarvis and others. This work is so theoretical, and there are so many phases of the body to consider, that in my opinion any dietary form of treatment is better instituted and carried out by an internist after careful and thorough general study of the individual case.

In the case of otosclerosis the activities of the otologist, in the light of our present knowledge, will be largely advisory, and usually any treatment, directed not towards the otosclerosis but towards the general condition of the patient, will be carried on by the internist. Incidentally there seems to be some disagreement as to the frequency with which

we see otosclerosis. One eminent otologist has said that one in every three cases he saw was otosclerosis. This seems hardly possible if we are all thinking of the same thing, for most of us, if we are careful as to what justifies this diagnosis, will agree that it is rather rare. Of course one of the big weaknesses of medicine is the attempt to arbitrarily designate and classify disease conditions into definite groups, dealing with names rather than conditions. But with the rather discouraging and hopeless attributes that have become attached to otosclerosis I feel that one should be very careful not to so designate what might better be called a chronic progressive deafness, unless the diagnosis be obvious.

To my mind the ideal form of treatment commences with group diagnosis of the possible causes of the impairment of hearing, in every case, except where the cause is perfectly obvious. Each case of defective hearing should go through a certain routine, following a thorough otological examination. The sinuses and teeth should be X-rayed. A careful internist, who understands the problem, should go over the individual thoroughly, and such leads as he may find should be followed out. Blood examinations, including chemistry, and Wassermann and Kahn tests, urinalyses, examinations of stools, and often of gastric contents should be performed. Metabolism tests should not be neglected. Just recently we had a case of impaired hearing showing a marked loss of the nerve impairment type. While the man had what might be considered as suspicious tonsils, careful, thorough examination, as above outlined, showed a very definite case of pernicious anæmia. It is well to avoid the mistake of assuming, from the patient's story, that something important has already been done. The condition is usually serious enough to risk repetition to make sure every possible lead has been developed. Much depends upon proper technique and upon interpretation, and it is well to insist upon having the co-operation of consultants known to be reliable. Patients may say that they have just recently had their teeth examined and X-rayed, and that everything was found to be all right. It is always a source of considerable chagrin to

have some other otologist insist upon further X-rays and discover an abscessed tooth. The same holds true of the sinuses. It is a good rule to insist upon a definite routine, even at the expense of possible repetition. Unfortunately sometimes it is difficult to convince patients of the wisdom of this plan. They may be suspicious that you are increasing their expense, or that you do not know as much as they thought you did. The latter I am always willing to admit—they will find it out soon enough, anyway—but the former I try to overcome. With a little logical reasoning, it is not usually difficult to convince the intelligent and coöperative patient that this is all for his own advantage. The re-

verse type of patient one will be fortunate to side-step, anyway.

To sum this up—the treatment of deafness is the treatment of the cause. The first step, therefore, is to try and ascertain the most probable cause. Having found this, the treatment may be otological but is more likely to be rhinolaryngological, medical, dental or neurological.

Future developments of artificial aids should render corrective treatment of the deafness itself more efficient.

Scientific studies now being carried on at various medical centers, especially Johns Hopkins, promise added knowledge as to the causes of deafness and may thus increase the efficiency of treatment.

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Short Working Year for Nurses

Nine months of work in the year—that is the most a nurse can hope for in the United States to-day. The average nurse won't actually get that much.

Exact figures on the oversupply of nurses in this country were made public at San Antonio, Texas, April 12th, when Dr. May Ayres Burgess, director of the Committee on the Grading of Nursing Schools, told 4,000 members of the already agitated nursing profession that no more than 273 days of work in the year are available for the average nurse. Dr. Burgess spoke before a session of the biennial convention of the three national nursing organizations, the general topic being "Nursing at the Crossroads."

This nine months of work for each nurse would be possible only if nurses served all the sick Negroes in the South, and if all the very poor and all the sick in remote rural

districts were adequately nursed during severe illness. Moreover, this 273 days' employment would actually be available only if sickness were spread out evenly throughout the year and divided evenly among all nurses.

"This year 25,000 young women for whom there is no work will be graduated from the nurses' training schools," Dr. Burgess declared. "Next year there will be another 25,000, and the year after that still another. In the ten years from 1920 to 1930, the population of the entire United States has increased 16 per cent., but the number of graduate nurses has increased 97 per cent. The United States Census gives a total for 1930 of 294,268 trained nurses."

High school principals and teachers must be made to realize what conditions are in nursing, it was pointed out. No second rate high school student stands a decent chance

of being self-supporting in nursing to-day. Only the best students in the graduating class should be encouraged to go into nursing, because they are the only ones who stand a chance of being successful in an overcrowded and highly competitive field.

"Overproduction is bad," Dr. Burgess told the nurses, "because it means unemployment and distress to the present generation of nurses. It is even more serious because it means a sharply curtailed supply of intelligent young nurses for the future. The only way to attract the intelligent girl into nursing is to demonstrate through the happiness and success of the women who already belong that the profession is a desirable one to enter. That is why the most important task for nursing to-day is to reduce the numbers of new nurses entering the field and to make it possible for every qualified nurse to earn a satisfactory living."

Dr. Burgess believes that the only way out is for the nurses to go into partnership with the public. Closing hospital training schools for nurses will not come as a purely voluntary measure. Superintendents of hospitals and superintendents of nurses sincerely believe that their schools are better than others and that their graduates are needed in in-

creasing numbers, even though there is unemployment among their alumnae at the present time.

Dr. Burgess outlined four tasks for the nurses in securing a working partnership with the public. They are as follows:

1. To give full publicity to the facts about the overproduction of nurses and the necessity for choosing new students with the utmost care.
2. To obtain close personal contact with influential citizens, so that those who shape public opinion may become interested and informed concerning nursing problems.
3. To be on the alert through local nursing organizations to work with the public on the side of desirable public health movements, so that community leaders will learn to look to the nursing organizations for coöperation.
4. To wage an effective campaign against any attempt to continue or increase the overproduction of nurses in that community.

AMERICAN NURSES' ASSOCIATION,
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Social Insurance

Quality of Medical Services Deteriorate Under Compulsory Health Insurance

In preceding articles Social Insurance as a whole has been considered. In this and subsequent articles our observations will deal more particularly with Compulsory Health Insurance, one phase of Social Insurance. The chief danger to medical progress and efficient medical service to the American public comes from that small group who wish to establish lay bureaucratic control over the private practitioners of medicine and dentistry.

The state exercises a legitimate and proper function in public hygiene and sanitation, the teaching of personal hygiene in schools and colleges, in the medical care of paupers,

criminals, and the indigent in general, but whenever and wherever it has entered into the private practice of medicine it has always resulted in inefficiency. Even in institutional work, with the possible exception of University Clinics, the medical service rendered by the government is rarely excellent or even good, nearly always mediocre and oftentimes even worse.

The health, happiness, prosperity and efficiency of the citizenship of any nation depends more upon the integrity, ability, unselfishness, and enthusiasm of the medical and dental professions and upon the quality of medical and dental services rendered to the

people than upon any one other factor. Any change in the practice of medicine and dentistry which will in any way hinder these professions from giving their best services will eventually react unfavorably upon the whole nation. That state medicine and Compulsory Health Insurance actually will and does lower the general quality of medical and dental services is supported by reason and experience. While it may level up a little from the bottom it unquestionably levels down from the top, and it is this leveling down that will surely stop medical progress.

Medical progress depends not so much upon the rank and file of the profession as upon occasional great men with vision. If we unduly hamper these great medical minds, medical progress must cease. The quality of medical services received by the people in general depends in large measure upon the quality of teaching which the rank and file of the profession receive, and upon the enthusiasm and the ideals which are instilled into them by their teachers. Men of great ability can do their best work only if absolutely free, and a physician under lay bureaucratic control never is entirely free. Andrew Carnegie, one of the most successful men of modern times in the best sense of that word, makes the following statement in his autobiography: "Thereafter I never worked for a salary. A man must necessarily occupy a narrow field who is at the beck and call of others."

One of the continually recurring misstatements in the Compulsory Health Insurance propaganda is that it encourages personal hygiene and consequently disease prevention. Nothing could be farther from the actual facts. Which person is more likely to take care of his teeth—the one who gets his dental services free, or the one who has to pay for it out of his own pocket? Those who claim the former just do not know human nature.

One of the chief causes of wonder of the Germans during the World War was the splendid condition of the teeth of the American soldiers as against the almost universally poor teeth of the Germans. Why this great difference? The chief and principal reason is that American citizens have their teeth taken care of by private dentists, who take a very personal interest in each individual

patient. Most American dentists and physicians are spending much of their time instructing their patients in general and oral hygiene. Contrast this with the work of the Krankenkasse physician of Germany, who asks his patient one or two questions, then reaches into a file, hands him a typewritten prescription and gets rid of him just as quickly as he can and as he must, if he is to see fifty patients in an afternoon office period of two hours; and this he is by force of necessity compelled to do if he is to make a living for himself and his family at twelve cents an office consultation. Then again the claim is made that Compulsory Health Insurance examinations are more thorough. This, too, is a statement contrary to fact and to reason when one realizes that the sort of office consultation above described gives the physician the same pay as a thorough physical examination does. No man can afford to make a careful, painstaking examination for twelve cents, not even in Germany, where living expenses are almost as high as in this country. One "Krankenkasse" physician in Berlin told me personally that he made twenty-three house calls in four and one-half hours, or at an average rate of one in a little less than twelve minutes, driving from house to house, going up from one to four flights of stairs each time, examining a patient and prescribing for him.

Brend states that in England the average time spent by panel physicians in making a diagnosis is from three to four minutes. Another English writer, in commenting on the above facts, rightly observes that these are not abuses of Compulsory Health Insurance but inherent faults of the system.

We have all repeatedly seen and heard the statement that seventy per cent. of the American people—namely, the low and moderate income classes—are not getting adequate and efficient medical services. Where those who make this statement get their statistics no one has ever been able to find out. The fact is that there are no statistics available on this point. From this it must be evident that the only place they can get these figures is from the depths of their fertile imaginations.

If we stop to investigate the source of these

statements, we invariably find that they emanate from two classes of individuals, namely, a certain type of ultra medical specialist whose only experience is or has been with the extremely rich, whom he charges fancy, exorbitant fees, and with paupers, whom he treats in charity hospitals. As a consequence, he has had no personal experience with patients with moderate incomes and has no right to express an opinion on this subject. The other class who repeat these figures are usually persons who never have had personal experience with the practice of medicine and hence their opinions are practically worthless.

I maintain that the poorer classes of patients get better services in this country than they do in those countries of the world that have Compulsory Health Insurance, and that their medical requirements are at least as efficiently met as are their food, clothing and particularly housing requirements. This phase of the problem is an economic one and cannot be solved by a palliative such as Social Insurance is.

(The effect of Compulsory Health Insurance on the quality of medical services will be further discussed in the next article.)

Necrology

*Byron Fuller Barker,
Bath, 1872-1932*



It happened, during the Great War, that

I was asked by a colleague at Bath to look after his patients during his absence. In carrying out this most agreeable errand, I was off for Bath once a week, early, and saw patients as they called. Right across the hall from my friend's office was that of Dr. Barker, and at every visit to Bath I made him a call. He always impressed me as being a most charming and agreeable man, and remarkably well posted in his profession: just made to attract the confidence and friendship of his patients, and to administer to the needs and longings of those afflicted with disease. This acquaintance with Dr. Barker caused me to feel a deep and lasting personal loss at the news of his sudden death, late in April.

It is rare for a boy to grow up, to be educated in his native city and then to settle there for medical practice and to make so undoubted a success of it for life, so that more than usual emphasis is to be laid on the career of Dr. Barker, and on the loss which his friends and patients have suffered in his death. Briefly outlined, then, the story of Dr. Barker's life is this.

Born in Bath, November 19, 1872, the son of Samuel and Julia Fuller Barker, he died April 29th in the Bath Hospital from acute appendicitis. He was the youngest boy ever to graduate from the high school and was a great favorite at Bowdoin in the class of 1893. His longings as a young graduate were for a career in journalism, but he was urgently persuaded by his grandfather, the late Dr. Andrew J. Fuller, to study medicine, in which his grandfather foresaw a fine career ready for him in Bath and so he took his degree of medicine at Jefferson in 1896. He then attempted the heroic task of building up a practice in his native city, and he succeeded magically. His personal charm interested clients to consult him and his demonstrated skill proved that their confidence was so well repaid that they soon obtained for the young doctor a large and well pleased clientage, widening throughout his thirty years of practice.

His life was devoted to the practice of

medicine, he read widely, had few if any, side issues, took short and few vacations and was a model of what a careful, cheerful, conscientious medical adviser should be. He studied the latest medical treatises and had them ready in mind for emergencies. He was keen in diagnosis, was trusted implicitly, and was a pleasing gentleman in the house of sickness.

Although he took great interest in the public affairs of Bath, he held but few political offices, was engaged occasionally in banking affairs, was highly esteemed as a citizen, President of the Sagadahoc Medical Society, Fellow of the American College of Physicians, and devoted to the foundation, maintenance and upbuilding of the Bath Hospital, serving on its medical staff for years. During the war he was of great service to the nation by his careful selection of recruits to serve in our armies at home and abroad. As a fellow practitioner has so pleasurably written me, "It was a joy to meet him in consultations and an inspiration, too, from his common sense, his courtesy, and his wide and varied medical knowledge."

During the hour of his funeral, the city bells were tolled, the city flag fixed at mournful half mast, and many offices and public buildings were closed as a token of deep and keenly felt respect, admiration and regret.

Dr. Barker married, in 1901, Miss Clara Mildred Todd, of Bath, and is survived by her. So now, with these words, we bid to a very able and very delightful comrade and man of medicine, a long and last farewell.

J. A. S.

Letter to the Editor

To the Editor :

May I add a few interesting facts to what has already appeared in your local paper regarding my brother, Dr. George B. Swasey, so many years in practice in your beautiful city?

He came from a long line of physicians, as his grandfather, his father, one uncle, two

cousins and two brothers were physicians, and all in "general practice" except one, so the practice of medicine was almost born and bred into his life. He held it in high regard, and never in all those years did he do or say anything to do violence to its best traditions.

He saw, as we all do, in the practice of medicine to-day, very decided changes that are here and yet more to follow. The very evident tendency to depend upon the hospital for most ordinary cases of sickness and minor surgery, and the great increase of specialism in all its branches, he often wondered what was in store for future men "in general practice." In all his life he never used tobacco in any form, and never used any stimulant in any form. The "Brooks" in his name came from his mother, who was a native of Portland and the only aunt of Phillips Brooks on the Brooks side of the family. The high regard he held of his famous cousin ("the prince of preachers," as Dr. Cadman once said) was little short of veneration.

He was one of a family of seven children, and I am the only one remaining. God bless him, and peace to his ashes!

EDWARD SWASEY, M. D.

Worcester, Mass.

—*The Portland Evening Express (May 23).*

County News and Notes Cumberland

The Portland Medical Club held its annual outing Tuesday, June 7th, at the Cascades.

A meeting of the Cumberland County Medical Society was held at the Eastland, on Friday, May 27th. After dinner Dr. Herman Pitts, of Providence, a well-known gynecologist, talked on "Uterine Cancer." In the afternoon clinics were held at the Maine General Hospital.

Kennebec

On June 2nd the Kennebec County Medical Association met at the Lake View Arms Hotel, at Winthrop, Me. Dr. Wm. O'Connor, of Augusta, read

a paper on "Treatment of Gastric Ulcer," and a paper on "Gynecological Generalities" was given by Dr. Adam P. Leighton, Jr.

Washington

The regular spring meeting of the Washington County Medical Society was held in Eastport, May 26th. Eleven members and three visitors present.

Dr. Conrad Wesselhoeft, of Boston, Mass., spoke on "Acute Anterior Poliomyelitis." E. H. Bennett, M. D., of Lubec, Me., read a paper, "Can a Man Practice Medicine Successfully and Be Honest?" Councilor Wakefield, of Bar Harbor, Me., addressed the meeting.

P. J. MUNDIE,
Secretary-Treasurer.

York

The summer meeting of the York County Medical Society was held at the Cascade, on the State Road, Saco, June 8th, afternoon and evening. Invited guests from Cumberland County Medical Society and wives, York and Cumberland Counties dentists and wives. Banquet at 7.00 P. M., Daylight Saving Time. Papers were read by E. S. Hall, M. D., on "Newer Aspects and Changes in Treatment of Fractures," and by Dr. V. H. Kazanjian, on "Oral Surgery."

DR. CHARLES W. KINGHORN,
Secretary.

News

Dr. Elliott P. Joslin, of Boston, will hold clinics on the afternoon and evening of Wednesday, June 15th, at the Franklin County Hospital. All attending the convention are invited.

Notice

An invitation has been extended to American physicians and surgeons by the medical associations of Leningrad, Moscow, and other cities of Soviet Russia, to visit their hospitals, clinics, research laboratories and similar institutions.

This is the first occasion ever offered the American physicians to inspect officially these most interesting phases of Russian medical life.

The group of American physicians which is now forming will sail this summer.

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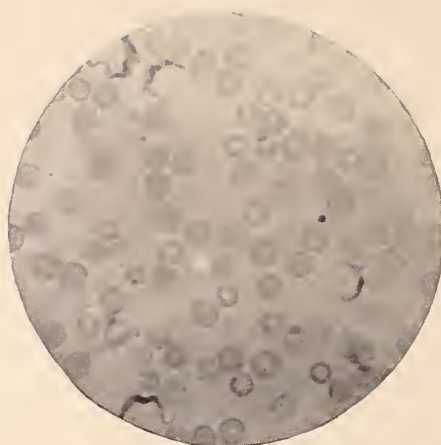
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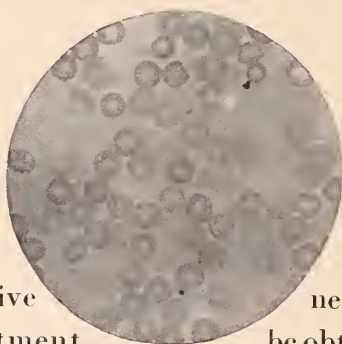
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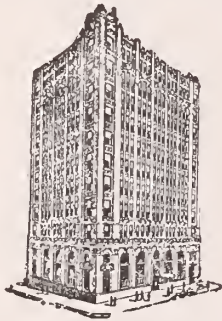
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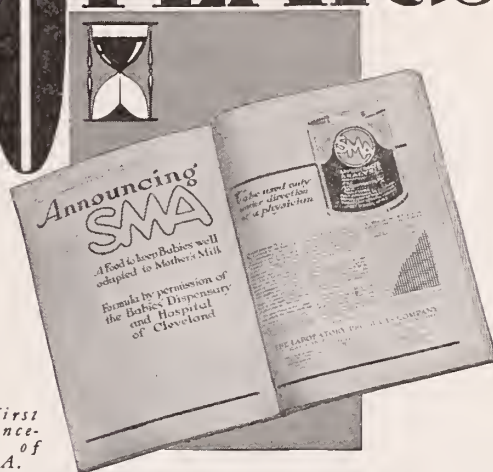
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Maine Medical Journal

The Official Organ of

The State and County Medical Societies

Vol. XXIII

Portland, Maine, July, 1932

No. 7

Editorial

Our Eightieth Session

The eightieth annual session of our Association at Rangeley was marked by good attendance, about one-third of the active membership registering. The program was well balanced and the papers read of unusual merit. The committee is to be congratulated on the success of the round table conferences, which occupied the morning sessions.

At the banquet, Dr. John Bowers, of Portland, received at the hands of President Call the gold service medals given by the Association each year to those who have completed fifty years of practice. Six men were thus honored: Dr. John Bowers, Dr. Clarence Baker, Dr. Eben Alden, Dr. Joseph Gordon, Dr. George Upham, Dr. Cecil Wasgatt.

Dr. W. E. Kershner, of Bath, a man who has well served the Association for many years as a valued member of our Council, was chosen President-elect. Dr. Kershner said: "I assure you that it is a pleasure to be so signally honored. I think it is probably in recognition of length of service rather than meritorious service. My association with my fellow members as dele-

gate, in the Council, and as I have met them here, has been over these years a constant delight. I thank you for the honor, and I hope that I may get along as satisfactorily as has my distinguished predecessor."

Transactions of House of Delegates

- I. Upon recommendation of the Council, the sum of \$6,350.00 was accepted to cover the budget for 1933.
- II. The state dues for the coming year were fixed at \$8.00.
- III. The salary of the Secretary-Treasurer was increased by \$300.00.
- IV. The following officers and committees were elected:
 1. Scientific Committee:
 - F. T. Hill, Waterville, Chairman.
 - Samuel Webber, Calais.
 - E. W. Gehring, Portland.
 - Lester Adams, Bangor.
 - The Secretary, *Ex-officio*.
 2. Medical Education and Hospitals:
 - C. J. Hedin, Bangor, Chairman.
 - E. H. Risley, Waterville.
 - J. B. Shaw, Fairfield.

3. Medical Advisory Committee:
E. G. Abbott, Portland, Chairman.
Philip W. Davis, Portland.
W. G. Chamberlin, Fort Fairfield.
E. D. Merrill, Dover-Foxcroft.
George E. Young, Skowhegan.
Allan Woodcock, Bangor.
4. Legislative Committee:
E. D. Merrill, Dover-Foxcroft, Chairman.
L. P. Gerrish, Lisbon Falls.
F. E. Bennett, Presque Isle.
5. Committee on Public Relations:
H. C. Knowlton, Bangor, Chairman.
A. P. Leighton, Portland.
G. A. Coombs, Augusta.
C. W. Bell, Strong.
6. Cancer Committee:
H. E. Thompson, Bangor, Chairman.
Barbara Hunt, Bangor.
Julius Gottlieb, Lewiston.
Isaac M. Webber, Portland.
R. W. Wakefield, Bar Harbor.
A. H. McQuillan, Waterville.
7. Committee on Nursing Affairs:
R. V. N. Bliss, Bluehill, Chairman.
B. L. Bryant, Bangor.
Wallace Webber, Lewiston.
F. H. Jackson, Houlton.
8. Memorials:
T. A. Foster, Portland, Chairman.
F. T. Hill, Waterville.
S. W. Boone, Presque Isle.
9. Social Hygiene Committee:
W. L. Holt, Augusta, Chairman.
B. B. Foster, Portland.
E. S. Merrill, Bangor.

Delegate for two years to the A. M. A.:

B. L. Bryant, Bangor.

Delegate to the National Council:

Dr. Wallace Webber, Lewiston.

Delegates to State Societies:

New Hampshire, Dr. J. D. Phillips,
Southwest Harbor.

Vermont, Dr. Geo. E. Young, Skowhegan.

Massachusetts, Dr. E. V. Call, Lewiston.

Rhode Island, Dr. H. E. Marston, North Anson.

Connecticut, Dr. A. H. Little, Portland.

Delegates to New England Council:

Dr. B. L. Bryant, Bangor.

Dr. William Ellingwood, Rockland.

Dr. Geo. E. Young, Skowhegan.

The President and Secretary, *Ex-officio*.

Dr. William Ellingwood, of Rockland, was elected Councilor for the Third District, and Dr. F. R. Carter, of Augusta, for the Fourth District.

Dr. James A. Spalding, of Portland, was re-elected Necrologist. The House of Delegates was in receipt of a letter from Dr. Spalding, expressing himself as sorry for his inability to be present on account of the serious accident he suffered last winter, in which he fractured his hip.

The House of Delegates noted with regret the death of Dr. Mann, of Houlton, and in general session the Association listened to Dr. Jackson, who paid fitting tribute to his memory from the floor. Resolutions of appreciation of his long years of faithful service were passed, and the Secretary was instructed to express in writing to Mrs. Mann our sympathy and sorrow.

The House approved a plan as presented to it by Dr. Hanscom, Director of State Institutions, for the appointment by the Governor of a full-time salaried consultant to the Tuberculosis Sanatoria.

The House went on record as in favor of a suggestion of Dr. Mortimer Warren, Commissioner of Poliomyelitis Control, that an advisory committee on Infantile Paralysis be appointed to confer with the Commissioner of Health and Welfare; that the President of the Association, with the help of the Council, prepare a list of names from which the Governor may choose such a committee.

The House Resolved, That the Association express its appreciation of the interest Governor Gardiner has shown in the problem of poliomyelitis control, and its wish to cooperate further in any desirable way.

Amendments to By-laws

The By-laws were amended as follows:

Chapter IV, Section 7, to read: "The election of President-elect shall be by direct ballot. Said election shall be held at the close of the first general afternoon assembly at each annual session."

Chapter VII, Section 2, to read: "The Committee on Scientific Work shall consist of four members, of which the Secretary shall be one."

Chapter VII, Section 8, to read: "The Cancer Committee shall consist of six members, three of whom shall be surgeons."

The Poland Spring House was chosen as the place of meeting for the next annual session.

The Treasurer's report and the audit of the Association accounts will be found elsewhere in this issue.

Further transactions of the House, with editorial comment on the work of the Reference Committee and reports of committees, will be found on a subsequent page.



E. D. MERRILL, M. D.
President Maine Medical Association



President's Address

Importance of an Early Diagnosis in Preventive Medicine

Prevention of disease has been uppermost in the minds of the medical profession for years, but increasingly so in the past ten years.

The history of preventive medicine dates back to 1798, when Jenner discovered vaccination as a prevention against smallpox. This was the first great application of immunological principles, and antedated any modern conception of the germ theory by seventy years. Then in the next hundred years, means were found to prevent the great epidemics of diphtheria, typhoid, and yellow fever, and tuberculosis.

It is well to look back over the past thirty years and note the change in the work of the individual practitioner.

Thirty years ago, a large part of a doctor's daily calls were made upon patients suffering from typhoid fever and its complications in its season, diseases of children, especially in the warm months, due to impure milk or food, and on tubercular patients before the sanatoriums were built and these patients were removed from the home. A great part of these daily calls have ceased.

Preventive medicine is the prevention of disease along two lines of action: one, the prevention of the contraction of certain diseases; the other, the prevention of serious developments or sequelæ of the disease contracted.

Prevention of diseases has been accomplished by the specialist in research laboratories, also discoveries made of the cause of disease and the means of combating them. Whereas, in the early days, people died in masses, whole families and settlements being wiped out, all this is now prevented, and it is the individual who most needs our attention.

Health is the greatest asset of country, state or individual, and in this age of greatest efficiency in industry and advancement of education and welfare, there has come a general public demand for better health. Large insurance companies have foreseen this condition and organized to make periodic health examinations of their employees and

their insured, in order to reduce illness and lengthen the span of life.

Everywhere public health organizations have been founded. Wealth, in the larger communities, has established enormous charitable hospital clinics, supposedly for the poor, but attracting all classes to their doors, in many cases no investigation being made as to whether they deserved charity or not. Physicians are willing and eager to give a large part of their time to make possible these clinics. The germ of state and social medicine is fast growing, and the art of the family physician is rapidly becoming the science of community or social medicine. The matter of health has become a matter of general concern and public policy, but the family physician is still absolutely necessary. "The prophecy of future medicine lies hidden in the past."

All these great preventives of death of the masses have been accomplished by the individual specialist, by long hours of hard work in the laboratory, the kind of work for which not one in several hundred is especially fitted. Under socialized medicine, this specially fitted man would not be doing the research work, because the appointment of such a man would be influenced by political factors and not by ability. Should the state take over the practice of medicine, it would take away the individual ambition, and a large part of the progress of medicine would stop.

We know that the average man to-day reaches the age of fifty-eight years instead of twenty-eight, which was the average span of life several hundred years ago. All this has been accomplished by the development of preventive medicine—pure food in reducing infant mortality and by serums in the annihilation of epidemics. To a great extent in the past, these measures have been made possible by the individual or specialist adapted to or interested in just that one field. In the future, the employment of preventive measures must be chiefly the responsibility of individual practitioners.

The most essential thing as it relates to medicine to-day is finding pre-clinical symp-

toms and making an early diagnosis. It is true that very little, if anything, is taught to-day in the medical schools on pre-clinical symptoms and not much on early diagnosis. These should be stressed to the medical student. The individual practitioner who sees a case first must interest himself in these two essentials if we are going to continue the reduction of illness, lengthen the span of life, and prevent serious end results of disease.

Along this line of thought, when we consider that one out of every twenty individuals over forty years of age dies of cancer, if we are to believe the statement of Dr. Charles Gordon Heyd, Professor of Surgery of New York Postgraduate Medical School and Hospital and of other hospitals, we at once can see that one of the broadest fields of preventive measures is the early recognition of lesions that are pre-cancerous and lead in the end to the development of malignancy. Here I advocate another nation-wide cancer campaign for the education of the people, and that literature be placed in the hands of the medical profession as was done twenty years ago with so good results. It is only natural for these things to drop out of the minds of the public and for the less careful physician to overlook the importance of the recognition of pre-cancerous lesions.

Dr. Joseph Bloodgood, in a recent article published in February, 1932, states as follows in regard to cancer of the mouth:

"Fortunately, education of the public has reduced cancer in this region more than ninety per cent. In the great surgical clinics of the world, up to 1910, the majority of patients who entered the clinics because of trouble with the mouth had cancer in more than ninety per cent. and hopeless cancer in more than seventy per cent. To-day, in these clinics where advice is sought and individuals have been properly informed, cancer is found in less than ten per cent., and as a rule that cancer is early and curable."

Statements equally as important may be quoted in cancer of other parts of the body. Dr. Heyd further quotes:

"Seventy per cent. of all breast tumors occurring in women over thirty years of age are actively or potentially malignant, and fifteen per cent. of the remaining thirty per cent.

which are benign in the beginning will eventually become malignant. The chances are that in eighty-five per cent. of the patients with a lump in the breast which is left undisturbed, the tumor will eventually become malignant."

Here is a great field for preventive surgery, for the majority of men agree that every tumor in a woman's breast should be removed and its character determined by frozen section. We all know that excision is a cure before the onset of malignancy, while the most radical operation after its onset is followed by a high per cent. of recurrence.

Another field where cancer is most prevalent is the uterus. Any deviation from the normal menstrual history should be regarded with suspicion. Bleeding at the cancer age, between periods, after exertion, after defecation or urination, is strongly suggestive. Bleeding from the uterus after the menopause usually means carcinoma or a polypus. A thin, watery, irritating discharge, having a strong odor and occasionally blood-stained, is a precursor of actual bleeding from cancer. To wait for pain and loss of weight is to pass from an operable to an inoperable condition. Increase in the length of the menstrual flow, the amount or changes in the character of its blood are suggestive of uterine tumor, although not necessarily malignant. Extension of the menstrual period beyond the time of natural expectation for that family is significant of fibroid of the uterus. The early diagnosis of these fibroids and early treatment will prevent the development of complications such as myocarditis, and will also prevent a later, more extensive, shock-producing operation. The danger of malignancy will also be obviated.

All the prevention and cure of malignant disease in this and other parts of the body depends upon the education of the people to put themselves under the care of a physician at the slightest sign of any irregularity and for the medical profession to be on guard for pre-clinical signs, realizing at all times that the stages of prevention and cure are most important and most difficult to detect.

Another field for preventive measure to-day equally as great as cancer is tuberculosis. Tuberculosis, as we all know, is due to infection by the tubercular bacilli. We know that

this disease should be eradicated, and some enthusiasts on this subject say it can be. Theoretically, tuberculosis can be eliminated by the complete protection of healthy individuals from tubercular bacilli. Practically, such complete protection is not possible because of the widespread incidence of the disease in civilized society, and the manifold and insidious opportunities offered for its spread. If we are to make headway in the eradication of this disease, we must begin with the children who are especially susceptible to tuberculosis, many of whom succumb to the disease in early life. The diagnosis must be made on the pre-clinical symptoms before the rales in the lungs are well pronounced and the sputum positive.

The education of the public is a most necessary factor, and the hospitalization or sanatorium treatment for the cases offers the most benefit by getting these cases out of the homes at once and by so doing preventing the infection of other members of the family. The education of the patient while at the sanatorium to look out for himself by proper diet, fresh air and rest is of great benefit to him after he returns home.

In view of the fact that our sanatoriums are full and have a long waiting list, it would seem that there is an increase of tuberculosis throughout the state, or that the physicians and public health workers are accomplishing the very object which I am stressing, that of finding the cases in the early stages of the disease.

Because of lack of sanatorium room, I recommend that a wing be built on the sanatorium at Hebron, which, I understand, would take care of the waiting list for a time.

More sanatorium room is most necessary, if we are going to attempt to suppress the spread of the disease.

Lastly, and most important of all the subjects which I have mentioned for prevention, it seems to me, is appendicitis. Statistics show us that the mortality of appendicitis has increased in the past ten years.

Twenty-five years ago the medical profession was more conscious of appendicitis, because then it was the subject of discussion and the medical journals had much to say about it. The public was being educated

to the fact that a pain in the right side meant trouble, especially in the young adult. An early diagnosis was insisted upon, and an early operation was urged by leading surgeons.

It is a fact that the most outstanding cause of mortality in the young adult in the general hospital is ruptured appendicitis, and surgery, we know, undertaken at this time, when general peritonitis is present, is associated with high mortality. According to Willis, the mortality rate of appendicitis per one hundred thousand population has increased thirty per cent. It is unusual to-day to find hospitals presenting mortality statistics of less than six or seven per cent.

Murphy claimed, in 1904, that the surgeon who had a mortality rate of more than three or four per cent. was either receiving the patronage of incompetent or procrastinating medical men, or was doing too much manipulating in the peritoneal cavity under unfavorable pathological conditions. The Rochester General Hospital reported one hundred thirteen consecutive cases operated upon during one year. Fifty-eight of the series showed evidence of perforation of the appendix at the time of operation. Perforation had occurred in over eighty per cent. of twenty-three children who were brought in for treatment. I visited a children's ward in a hospital a few months ago and approximately one-third of all the children there were being treated for ruptured appendicitis. This is a lamentable situation.

The diagnosis of appendicitis must be made early. There are several reasons why this is not done. There is always the hesitancy of the family calling the physician. They may call someone from one of the cults who do not believe in operation, or the physician called may be slow in his judgment or hesitant about alarming the family, and may observe the case for a longer period than necessary in order to rule out other causes.

Murphy, in 1904, also stated that every death from appendicitis is chargeable directly to the people for not calling in the physician sufficiently early after the onset of symptoms, or to the physician and surgeon for not acting promptly when called.

The diagnosis of acute appendicitis is not

always easy, many of the most common symptoms not appearing at the usual time. Some of the chief symptoms are sometimes less pronounced or entirely lacking. It is, however, important to remember its probability, the prevalence of appendicitis, its frequency among children and young adults, and the fact that it is the most common cause for spontaneous abdominal pain should put everyone of us on our guard. Pain in the right side or rigidity in children on palpation and increased leucocytosis are far more consistently present and of more value than a rise in temperature or pulse. And, again, if we are to prevent deaths in this disease, we must direct our attention to the children, where it is most difficult to make a diagnosis. Pain in the abdomen, with nausea and vomiting, should not be laid to something the child has eaten and powerful laxatives resorted to.

In a case of suspected appendicitis an

enema will accomplish all that is desired and will tend to produce peristaltic rest, and transform a spreading peritonitis to a desired localized condition.

Early diagnosis on the part of the individual practitioner and prompt operation will lower the high mortality in this disease, and possibly lessen it from that of former years.

At this time, it is fitting to repeat the better results of earlier days, to refresh our minds after twenty-five years and stress the prevalence of this unsatisfactory condition.

To sum up, in a word, all I have tried to say of the importance of an early diagnosis in preventive medicine—every late case was at one time an early one. Someone saw the case first, someone did not recognize the pre-clinical symptoms, someone did not make an early diagnosis.

E. V. CALL.

118 Pine Street, Lewiston, Me.

**"Painful Women"*

By EDWIN W. GEHRING, M. D., F. A. C. P.,

Chief of Medical Service, Maine General Hospital, Portland, Maine

Whenever I ask a female to state her symptoms, and she replies, "I have so many that I have written them on this slip of paper, in order not to forget them," it has a decidedly bearish effect upon my spirits. I know, if I let her talk herself out, that eventually she will incriminate herself, albeit in the meantime I am suffering like a she-elephant in the pangs of childbirth, for I am confronted by a hypochondriac.

One may indulge in the luxury of terminology here and call these persons neurasthenics, or psychasthenics, examples of anxiety neurosis or just plain variants. In any case, they are the bane of the average physician's existence, for they tax his medical skill, his tact, his patience and his endurance to a degree not at all commensurate, as a rule, with their ability to pay. Possibly, for this reason, and others to be mentioned later, these poor souls receive, in most in-

stances, scant consideration at the hands of the profession or treatment which is most unworthy of the high calling wherewith we are called. Bandied about from one doctor to another, they become victims of much useless drug and mechanical therapy, and, meanwhile, drift out further and further upon the sea of invalidism.

Invalidism serves for a variety of adaptations. Sociologic problems are responsible for much of it. Consider the case of a "married female of forty-two summers who had complained of headaches for nine years. Her 'previous treatment' had consisted of morphia, two gynecologic operations and a drainage of the gall bladder. The somatic condition was negative, but the constitutional make-up rigid, prudish and self-acting. She had no desire for children, was disappointed in life, and used the headaches as a club over her husband."

* Read at the 80th Annual Session of the Maine Medical Association, June 18, 1932.

Another female of thirty years and unmarried had, for "two years, complained of pain in the back, side and stomach," for which she had, thus far, escaped with "an appendicectomy." "She had a chronic otitis media and a constitutional make-up which spelled self-indulgence, clinging and a craving for sympathy. This woman simply curled up in the presence of earning her own living, finding it easier to live on her sympathetic friends."

The existence of a sociologic problem oftentimes only becomes apparent after painstaking and persistent inquiry. The patient comes with a somatic complaint and carefully conceals her bizarre reaction to an unhappy experience such as a thwarted ambition, a petty jealousy, a husband with the technic of an English sparrow, or a desire to escape the responsibilities of life in the home or in the business or social world. The point to be borne in mind is, that the symptoms presented may be and often are a scapegoat for something else.

These patients occur in the proportion of about three females to one male. To the former, Hugh Cabot has aptly applied the designation "Those Painful Women." They are examples of those to whom Professor Overstreet alludes in his informative book, "About Ourselves," when he writes of those who take flight in disease. Examples may be found also among those women who, having rushed madly into some, to them, much-needed uplift work or reform, only to discover later that their object is unworthy and their noise a lot of ballyhoo, develop symptoms which confine them and thus excuse themselves, because manifestly one does not *expect the sick* to work.

They include the colorless, uninteresting, negative types, who, craving attention (as do all of us more or less) and receiving it not, fly to disease, knowing that illness calls forth sympathy, interest, inquiry, in general, *attention*, which is the thing desired.

Finally, one must not forget to add those living in a chronic state of fear which, according to Sadler, means that through the sympathetic nervous system the adrenals are hyper-functioning. Once this secretion gets into the blood-stream, there is no escape from the muscular tension, trembling, dyspepsia,

palpitation, perspiration and other accompaniments of an excess of adrenalin in the circulation.

"The minds of some persons are constantly registering the psychic fear alarm. The sympathetic is whooping it up with a continuous riot-call and the adrenals are over-secreting. Long after the physiologic stimulus has ceased, the habit-reaction continues and many of the symptoms, originally of physiologic origin, continue as the result of sympathetic irritability."

Concerning this phenomenon Cannon states in a personal communication, "There is a fair degree of probability that chronic fear may have effects which are similar to those of acute fear, but lasting. However, the evidence of this, so far as laboratory work is concerned, is not available." What happens in acute fear has been established definitely.

"If a caged cat is frightened or made angry by a barking dog it is likely to be glycosuric. Students after a hard examination, and football players after a thrilling contest, also have, in many instances, glycosuria. The mere handling of a rabbit preparatory to an operation may nearly triple the sugar content of its blood. If a muscle is fatigued, the threshold of irritability rises. With rest, normal irritability is slowly regained, though two hours may pass before recovery is complete. If, however, a small dose of adrenalin is injected intravenously or the adrenal glands are stimulated to secrete, former irritability may be recovered in three minutes.

"Fear and anger are attended by cessation of contractions of stomach and intestines. These mental states also reduce or temporarily abolish the secretion of gastric juice. Adrenin injected into the body has the same effect. Besides, adrenin drives out the blood which, during digestive activity, floods the abdominal viscera, and causes it to flow rapidly and abundantly through the heart, the lungs, the central nervous system, and the limbs. It also renders more rapid the coagulation of the blood. But such major emotions as fear and rage are *accompanied* by the discharge of a substance (adrenin) which can cause further excitation of organs innervated by the sympathetic system."

An analysis of the effect of the emotions on health, says Sadler, reveals the fact that fear plays a far greater part in human affairs than any other emotion, not excepting love. We have inherited this primitive instinct as part of the price of our ancestors' survival. Its physiological purpose is to assist us in fight or flight. When fear dominates the mind, the sympathetic nervous system pulls the adrenal trigger and a small amount of epinephrin finds its way into the bloodstream. Instantly the muscles become tense, the crouching attitude is assumed to lessen apparent size and put the body in better position for self-defense. The blood pressure rises, sugar stored in the liver is thrown into the circulation, providing an increased amount of fuel for the muscles and rapid breathing provides extra oxygen to burn up additional fuel. All this requires extra heart-action, hence the palpitation and pounding of the heart in time of fear. The whole performance increases the amount of heat generated, therefore the perspiration, which is a cooling process. Such is the physiologic or biologic mission of fear.

When, however, fear is less acute, but has become chronic, the patient becomes aware of *physical symptoms* and goes from doctor to doctor to learn the name of her complaint. Nothing wrong is found, from which the sufferer concludes either that all doctors are stupid or that they are conspiring to keep from her the true nature of her ailment. This results in an anxiety neurosis.

The fact that the fear is wholly imaginary or false makes no difference with the sympathetic-adrenal sequence which follows. Again, to quote Sadler, if one goes to a fire-alarm box and pulls an alarm, he gets the same response from the fire department by way of blowing of whistles, ringing of bells and racing of apparatus to the scene, whether the alarm be false or genuine. As with firemen, so with the sympathetic-adrenal hookup, it is its *business* to respond to an alarm.

"The consensus of opinion seems to hold that every somatic complaint must have a physical basis." Opinions differ as to psychic manifestations. The fact is, one cannot draw sharp lines between functions of mind and functions of body. While it is admitted that

there are many physical causes of fear, it seems reasonable to assume that fear is responsible for much bodily or physical suffering.

The point is that diagnosis is not so simple and easy as many laymen and physicians think, yet it is of prime importance, for one may not operate on abnormally sensitive persons, certainly, with impunity. Hugh Cabot is tremendously impressed, and all mechanical therapists ought to be, with the fact that a useless operation may do great harm. Quote, "If one fact in this puzzling situation is more clear than another, it is that unsuccessful operations of this kind do not leave the patient as she was before. Not only is she not the same, she is worse. Furthermore, we have, I think, overlooked the very definite effect of the trauma of modern surgery on personality. I gravely doubt whether any important surgical operation ever leaves the patient with as sound a personality as he had before. The degree of harm varies directly with the psychic abnormality."

Faulty adjustment to environment is a very common and a most potent cause of pain, real pain. In many of these "painful women," however, the symptom is a refuge for an abnormal mentality, a defense mechanism. There is no definite pathologic physiology discernible which an operation or a course of arsphenamine will relieve. No. Quite by accident has the patient stumbled upon an elemental psychologic truth—that as long as she *appears* and *pretends* to be healthy, nobody loves her, but the moment she *seems* to be sick her family and friends are at her beck and call. To all of which Cabot adds, "All of us have seen people, commonly women, but not rarely at least physically males, who will undergo any number of operations, face any risk, have hairbreadth escapes from death, simply that they may avoid facing the world in all its roughness."

The practical application of the foregoing is illustrated in the attempt to diagnosticate the real underlying trouble in the cases already quoted and in those which follow.

"Single, female of 24. Complaint, nausea, abdominal pain, vomiting. Duration one year. 'Previous treatment' for mucous colitis; thyroid disease; appendicectomy. Phys-

ical examination negative. Constitutional make-up, shy, nervous child; efficient worker. Psychogenic material, worry over sister's illegitimate pregnancy; nursed sister who complained of nausea and abdominal pain. Stay in hospital, two months. Discharged well.

Single, female of 35. Complaint, restlessness and palpitation. Duration three years. Previous treatment, two operations for thyroid trouble. Somatic condition negative. Constitutional make-up, seclusive, reserved. Psychogenic material, patient in love with a married man. Stay in hospital, one month. Now at home of sister, who says she is well."

Or, "Take the case of Mrs. R., 49 years old, who comes with a diagnosis of gastric ulcer. Here is a woman past the menopause who has had a painful story for many years; who began her investigations with an operation upon her pelvic viscera twenty-five years ago. Nine years ago another operation, this time for the shortening of her uterine ligaments; seven years ago the appendix was removed; four years ago her gall bladder was abolished, these later operations in the midst of a prolonged, rather stormy menopause. Still she has pain. Careful study of this patient is negative, and yet the referring physician is annoyed that more surgery is not advised. In this case it may be suggested that surgery should have been resorted to with caution in the presence of extreme nervous irritability accompanying the menopause.

Too often we forget that sensations of bodily discomfort are *always* present in psychoneurotics; that they may be vague or acute, general or localized. Abdominal sensations are *so usual* among these persons as to have given origin among the ancients to the term "hypochondria."

According to Richards, "one often sees invalidism growing like a fairy weed out of some stray seed of somatic disorder, such as hyperchlorhydria, retroflexion of the uterus, visceroptosis, or a mild pulmonary tuberculosis, and so on. With the disturbance corrected, one would suppose the patient would give up her complaints. Not at all, she harps on them more than ever. The physician, thinking he must have overlooked something, and goaded by the feeling that he ought to be

doing something about all this distress, sends the patient from one specialist to another. It never occurs to physician or family to ask, of what is the patient making her complaints the scapegoat? Is it conscience or instinct or a natural tendency to inertia? Why is it that this patient with a mild degree of visceroptosis is collapsed in bed, when another individual whose roentgenogram shows a stomach almost to the pelvic brim accomplishes a good day's work with a maximum of enjoyment and a minimum of discomfort? Obviously, we are dealing with a situation too complex to be explained by visceroptosis."

Years ago Virchow said, "Jeder Mensch hat ein wenig Tuberculose." With equal truth it may be asserted to-day that everyone is neurasthenic to a degree. Neither by training nor make-up are all physicians capable of recognizing or treating this type of case. "To know an *organ* and its diseases thoroughly," writes Walter Freeman, "is the apparent goal of many medical and surgical specialists, but to know the *patient* thoroughly is the goal that should be set for himself by the *true physician*. All great teachers have emphasized this, and cautioned their students against too narrow a point of view. Nevertheless, it is only with experience and practice, backed up by humanism, that the view can be broadened, since the intensive study of a particular disease or system of organs leads to the neglect of the larger aspects of the case and of the individual in whom the disorder chances to occur. . . . The wise physician recognizes this, and the best physician is the best psychologist."

Our groping efforts after salvation in these perplexing conditions, as recorded by the "previous treatments" in the foregoing cases, reveal a crying need of a knowledge of the principles of psycho-biology. Without it, our *patients* may sometimes be said to drop out of sight amid their diseases.

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Can a Man Practice Medicine Successfully and Be Honest?

CALAIS, ME., June 25, 1932.

EDITOR MAINE MEDICAL JOURNAL,
22 Ainsel Street,
Portland, Me.

My Dear Sir:—I am sending you a paper written by Dr. E. H. Bennett, of Lubec, Me. He received last year the fifty-year medal, and is really the dean of the profession in Washington County.

I asked him one day, "Can a man practice medicine successfully and be honest?" On my recommendation he wrote this paper and read it at our County Medical Society, and I think many will be interested to read what he has to say.

We recognize in Dr. Bennett all that is fine and right, so must give his words great consideration.

Yours very truly,

W. N. MINER, M. D.

WNM-G

Mr. President, Guests and Members of the Society:

Twelve days ago I was invited by our Programme Committee, through the Secretary, to prepare a ten-minute paper on the hypothetical question, "Can a physician practice medicine successfully and be honest?"

There was evidently a grave *doubt* in the mind of the propounder of this question.

This question might be answered very briefly by an affirmative or negative reply, "Yes" or "No", but that would not require ten minutes or be entirely satisfactory. Again, the answer depends upon the interpretation of "success" and "being honest."

Apparently the best I can do is to attempt to answer the question from my *own* viewpoint.

I am a believer in the Binet-Simon psychological *scale-system*, or *theory*, as you please, which teaches that a child's *mentality* and *type* of mind may be as correctly *estimated* and *measured* as we now measure and weigh its body. According to this psychological system a child is born with a *mental chart*, an intellectual chart, which is made up of numerous *centers*, each of which controls a certain function, and is subject to develop-

ment. Here is where education comes in. The development of these *centers*, all of which are subject to cultivation, mark the *mentality* of the child as plainly as the color of its eyes. If this *chart* is scientifically studied by a *genuine* psychologist, the child's possibilities may be correctly diagnosed, and its parents informed as to what particular line of work the child is mentally qualified to follow. If this was a part of public school training, ten per cent. of all the millions of dollars expended for educational purposes in this country would not be *wasted* in *re-teaching* the child what it failed to get in the first year *because* its mind could not comprehend it.

If a scientific study of this mental chart indicates that the *gain* center is more highly developed than the others, and is not controlled by education, and the occupant decides to study medicine, the answer to the question, in his case, would be emphatically negative. The leading thought in a mind of this type is *gain!* He would accept the motto given by a certain mother to her son who was leaving home to seek his fortune in foreign countries. "Now, John, get money. Get it honestly if you can, *but get it!*"

Suppose the most prominent center is that of music, and he chooses medicine as his life's work, he will be out of place even at the funerals of his patients, for nowadays they do not have any.

It may be that the child may have an all-around brain, with no center *prominently* developed, then he will do for a Country Doctor, who is supposed to know a *little* of everything and not *much* of anything.

But we must get to the case of the *honest, successful* doctor. Physicians do not differ from other classes of men, in having all types of mankind on their list, from the most

exalted to the lowest, even the criminal. The real physician is not a *chance* product. He was born with the proper elements, characteristics, mental nuclei, etc. As I see it, his *truth* center, his *helpfulness* center, his *research* center, his *Scientific* center, *unselfishness* center, his *good business* center would be developed above the *normal*, with all the other centers at least normal.

The true physician is constantly in search of *truth*, *real facts*, not imaginary guesses. What is the *real* trouble here? What is the *pathological* cause underlying it? These may be very *difficult*, perhaps *unanswerable* questions, but they are the subjects of his thoughts, and his every effort to solve them will be plainly in evidence.

Someone may ask, how do you propose to secure this mentally, educationally equipped material? Simply by *properly assorting* the material we already have. No young man or woman should be allowed to begin the study of medicine without first having been scientifically analyzed and found fit. This will sooner or later be *legally* compulsory. This analysis should begin not later than school age and a test made quarterly. The mental diagnosis would be settled by the end

of the high school course. It must be remembered, of course, that inheritance, influence of home, environment, public schools, church, college, social friendships, etc., each have an educational influence, and each leaves its impression indelibly stamped on the individual mind as plainly as the government leaves its impression on our metallic currency.

When medical students are selected in some such way as I have tried to outline, physicians will be *honest*, *successful*, *truthful*, and immeasurably useful in their respective locations. So long as the field is open to all comers, the *Mass* will remain much the same as at the present time, the *success* and *honesty* of which you are to be the judges.

There is nothing in the practice of medicine that requires dishonesty on the part of the physician, but if he has an overgrown *greed* or *gain* center he will be *dishonest*, no matter where he is or what position he occupies, even to that of President of the United States, the highest that any man can be called to fill.

E. H. BENNETT.

Lubec, Me.

Types of Courage Encountered by a District Health Officer

By DR. G. H. HUTCHINS, Waterville (District Health Officer Fourth District)

(In answer to a request for a story about his varied work as a district health officer, Dr. Hutchins has sent us these epigrammatic paragraphs, written in his characteristic style and strung together on the satirical theme of "Courage.")

Inspections of some sporting camps are over trails so rough that it is safer to walk than to risk ptosis of body and mind with the jolting cart.

Mr. Blank had concreted and piped his water supply, sanitarily improved the toilet and sink sewage, and otherwise raised protective barriers for the guests' safety. One of their "miles in" was a sign, "BLANK'S CAMPS, 3½ miles."

Underneath some one had written with a blue pencil the word "COURAGE." Another

half hour's exertion, still up grade, in selecting footing either to keep it dry or from bumping on to rocks, was the second sign, "BLANK'S CAMPS, 2 miles." Again was the blue pencil commentary, "MORE COURAGE!"

This year more persons were discovered who, unconsciously and unknowingly, have prepared themselves so that part of verse 28, Chapter II, in Matthew might be applied. These are people drinking water coming through a lead pipe over a period of years. It is surprising that it requires thirty to forty years to develop complaints to drive the drinker to the doctor. The early signs are so subtle and insidious, and of such a variety of non-definite clues, that unless a rural client's

water source and kind of pipe are proven to a certainty, there will be cases of unsatisfactory progress. Instances where water came through an iron pipe have disclosed the presence of remains of the original lead pipe still in the well. Two cases of infantile cataract are known where lead water was in use, and had been used during gestation.

A couple located this spring had used water through a lead pipe 1,100 feet in length for thirty-eight years, which was COURAGE. A year ago they were informed by their physician that they had lead poisoning. They now have difficulty in walking and are also using the water—MORE COURAGE!

The manager of a summer wayside eating and lodging place advanced time after time to different inspectors some excuse for not complying with the requests and rules which have placed Maine's tourists' stopping places upon an enviable position. Success with the excuses, even after reading the law, resulted in their continuance—COURAGE. Seated before the Judge, who was ready and willing to remit the fine, the same excuses were continued—MORE COURAGE! Addition of the fine removed the courage and excuses.

During free vaccination against diphtheria a parent stated he would take a chance and not have it done—COURAGE. Two years later the disease appeared and his boy contracted it. Again he took a chance in not following the doctor's orders—MORE COURAGE—with a disastrous ending.

The Schick reading following the use of toxoid or toxin-antitoxin requires more care than when used for the preliminary test. It is also more necessary.

A mother of one baby did not take it to the toxoid clinic held in her town, because she lived on a branch road and had no child in school. She took a chance—COURAGE. Within a short time her baby got diphtheria and died.

Some one changes or puts in new plumbing, with or without a permit, but leaving it all to the person employed. This plumber may not be posted on the plumbing requirements, or tries to worm out a greater profit or work off some bootleg fixtures. The check-up discloses the errors. The fix-up encloses more labor, more fixtures, more trouble, more expense and MORE COURAGE.

State Mortality and Morbidity Reports

DISEASES	Cases Reported in Four Weeks Ending May 28, 1932	Deaths in April, 1932
Measles,	923	6
German measles,	261	0
Bronchopneumonia,	107	36
Lobar and plain pneumonia,		51
Chicken pox,	86	0
Scarlet fever,	78	0
Gonococcus infection,	60	0
Whooping cough,	43	1
Pulmonary tuberculosis,	38	26
Other forms,		1
Syphilis,	33	3
Mumps,	32	0
Influenza,	28	26
Conjunctivitis,	15	0
Typhoid fever,	12	0
Diphtheria,	11	1
Vincent's angina,	6	0
Lethargic encephalitis,	1	1
Malaria (tertian),	1	0
Meningitis,	1	0
Auto fatalities,	0	3
Septic sore throat,	0	2
Meningitis, cerebrospinal,	0	1

State Morbidity and Mortality Reports

DISEASES	Cases Reported for the Four Weeks Ending June 25, 1932	Deaths for May, 1932
Measles,	375	9
German measles,	130	0
Chicken pox,	118	0
Scarlet fever,	89	3
Whooping cough,	70	1
Bronchopneumonia,	41	37
Lobar and plain pneumonia,		39
Tuberculosis, lungs,	37	30
Tuberculosis, other forms,		4
Mumps,	26	0
Influenza,	13	14
Diphtheria,	11	3
Vincent's angina,	6	0
Typhoid,	4	2
Conjunctivitis,	3	0
Meningitis,	3	0
Pellagra,	1	1
Poliomyelitis,	1	0
Undulant fever,	1	0
Auto fatalities,	0	12



Treasurer's Report

JORDAN & JORDAN
ACCOUNTANTS AND AUDITORS
Fidelity Building
Portland, . Maine

June 3, 1932.

MAINE MEDICAL ASSOCIATION,

Portland, Maine.

Gentlemen:—We respectfully report that we have completed an examination of your records for the year ended May 31, 1932, and find the same complete and correct as set forth in statements attached hereto.

Respectfully submitted,

JORDAN & JORDAN, *Accountants and Auditors*.

BALANCE SHEET, MAY 31, 1932

ASSETS

Cash—Fidelity Trust Co., checking account,	\$6,262.47	
Fidelity Trust Co., savings account,	932.28	
		\$7,194.75
Dues receivable, 1932,		\$1,296.00
Securities (cost)—(See schedule attached),		\$8,945.00
Furnishings and equipment,		\$510.87
Trust Fund investments—		
Prince A. Morrow Fund:		
12 shares American Agricultural Chemical Co. (cost),	\$ 348.00	
Thayer Library Fund:		
Fidelity Trust Co., savings account, No. 54,631,	1,313.35	
Social Hygiene Fund:		
Fidelity Trust Co., savings account, No. 54,236,	236.54	
		\$1,897.89
Total fund investments,		\$19,844.51
Total assets,		

LIABILITIES

Accounts payable,	\$139.59	
Total liabilities,		\$139.59
Assets in excess of liabilities,		\$19,704.92

TRUST FUNDS AND CAPITAL ACCOUNT

Trust No. 1—Prince A. Morrow Fund,	\$348.00	
Trust No. 2—Thayer Library Fund,	\$1,229.72	
Unexpended income,	83.63	
		\$1,313.35
Trust No. 3—Social Hygiene Fund,	\$220.52	
Unexpended income,	16.02	
		\$236.54
Total trust funds,		\$1,897.89
Capital Account, May 31, 1932,		\$17,807.03
Total Trust Funds and Capital Account,		\$19,704.92

CAPITAL ACCOUNT, MAY 31, 1932

Balance, June 1, 1931,		\$17,755.96
Add:		
1930 dues collected,	\$ 10.00	
Received from advertising space, 1931 convention,	259.00	
		\$269.00
		\$18,024.96
Deduct:		
Expenses of delegates to the A. M. A., 1931,	\$150.80	
Expenses of annual meeting, 1931,	602.84	
Expenses of committees, 1931,	25.00	
Medals given to honorary members, 1931 and prior years,	405.75	
		\$1,184.39
Adjusted balance, June 30, 1931,		\$16,840.57
Add:		
Net revenue in excess of expense, one year,		\$966.46
Balance, May 31, 1932,		\$17,807.03

STATEMENT OF REVENUE AND EXPENSE, ONE YEAR ENDED MAY 31, 1932

REVENUE

1932 dues subscribed,	\$5,584.00
Income from securities,	465.00
Interest received,	105.01
Advertising space, 1932 convention,	71.96
Total revenue,	<u>\$6,225.97</u>

EXPENSE

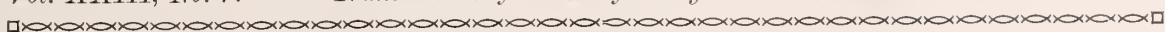
Secretary's salary,	\$3,000.00
President's expenses,	100.00
Office expense :	
Office salary, R. Gardner,	\$260.00
Supplies and stationery,	57.29
Insurance, Treasurer's bond,	10.00
Postage,	17.91
Telephone,	39.46
Auditing,	32.42
Safe deposit box rental,	5.00
A. M. A. Directory,	12.00
	\$434.08
Convention,	38.80
Committees,	11.35
Councilors' expense,	66.93
New England Council expense,	137.62
Delegates to the A. M. A.,	205.57
Clinics, Maine Public Health Association,	381.62
Medical Advisory Committee,	500.00

Annual meeting,	\$ 43.84
Secretaries' meeting,	46.70
Medals, honorary members,	81.00
Refunds, dues,	10.50
Dues charged off,	180.00
Miscellaneous—flowers, etc.,	21.50
Total expense,	\$5,259.51
Net revenue in excess of expense, one year,	\$966.46

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS, ONE YEAR ENDED
MAY 31, 1932

RECEIPTS	
Cash on hand June 1, 1931,	\$6,881.85
Received from dues, 1932,	\$4,288.00
Received from dues, 1931,	1,280.00
Received from dues, 1930,	10.00
Income from securities,	465.00
Interest received,	105.01
County dues received,	47.00
Advertising space, 1931 convention,	259.00
Advertising space, 1932 convention,	71.96
Total,	\$6,525.97
	\$13,407.82

DISBURSEMENTS	
President's expenses,	\$ 100.00
Secretary's salary,	3,000.00
Office expenses,	439.55
Councilors' expenses,	66.93
Delegates to the A. M. A., 1931,	150.80
Delegates to the A. M. A., 1932,	205.57
Clinics, Maine Public Health Association,	381.62
Medical Advisory Committee,	500.00
Annual meeting, 1931,	602.84
Annual meeting, 1932,	43.84
Secretaries' meetings,	46.70
New England Council,	137.62
Furnishings and equipment,	17.50
Committees, 1931,	25.00
Committees, 1932,	11.35
Flowers,	20.00
Medals, 1931,	405.75
Refund, county dues,	46.00
Refund, dues,	10.50
Expenses, Cumberland County meeting,	1.50
Total,	\$6,213.07
Cash on hand May 31, 1932,	\$7,194.75



SECURITIES—BONDS, MAY 31, 1932

		Cost	Market
2000	The Mortgage Bond Co. of New York, Series 7, 5½'s, 1935,	\$2,000.00	\$ 900.00
2000	Commonwealth of Australia, Ext. Loan, 30 years, 5's, 1957,	1,960.00	1,200.00
1000	Prudence Bond Corp., 1st Mtge. Coll., Series 6, 5½'s, 1936.	1,000.00	480.00
3000	Portland Terminal Co., 1st Mtge., 5's, 1961,	3,045.00	1,860.00
1000	Shenango Valley Water Co., 1st Mtge. G. B., Series A, 5's, 1956,	940.00	650.00
		\$8,945.00	\$5,090.00

RECONCILIATION OF BANK ACCOUNT, MAY 31, 1932

Fidelity Trust Company,	\$6,306.99
Add: Deposit June 1, 1932,	32.00
	\$6,338.99
Deduct: Check No. 324 outstanding,	76.52
	\$6,262.47

Transactions of House of Delegates Continued—Editorial Comment

An excellent provision of our Constitution and present By-laws requires that all reports of committees be in the hands of the State Secretary sixty days before the June meeting, in ample time for publication in the JOURNAL before the session. All members are thus able to digest these reports, and the work of the Reference Committee, together with the action of the House of Delegates upon suggestions or recommendations which may be made, greatly aided. This rule, if observed, ensures ample time for full consideration and action.

This year several committees failed to hand in their reports in time for publication, delaying their presentation until the Association and House were in session. As a result, discussion in the House was perhaps unduly prolonged. The Reference Committee was certainly hampered thereby, and could with difficulty do justice to some of the reports.

For the most part, the Committee concurred in the specific recommendations made, and the House accepted their report with few amendments.

The Committee on Nursing Affairs made no written report, asking for further time in order to do justice to the important matters referred to them a year ago. The House granted this request, continuing the committee.

The report of the Committee on Public Relations was accepted and referred to the Legislative Committee and Legal Council, since it recommends some change in the statute having to do with the performance and remuneration of autopsies.

The report of this committee was as follows:

Report of Committee on Public Relations

The committee wishes to report on one project alone, that of a change which seems advisable in the laws of the state relative to the performance of autopsies on individuals who seem to have died by violent means.

At present, as the law provides, these autopsies are performed by the Medical Examiners of the various counties. It seems to the committee that a better legal and scientific result could be obtained if these

autopsies were to be done exclusively by full-time pathologists.

To that end we would recommend that Section 3, Chapter 151, of the Revised Statutes of Maine be changed so that, if a complete autopsy be deemed advisable by the County Medical Examiner, the County Attorney or the Attorney General, the pathologist from the nearest general hospital employing a full-time pathologist must be called to perform the autopsy in an orderly and complete manner.

We would further recommend that no absolute schedule of fees be set for these men, as the amount of recompense must of

necessity vary with the time spent and the amount of expert knowledge required.

H. C. KNOWLTON,
for the Committee.

The House acted upon the suggestions of the Committees on Cancer and Scientific Work, increasing the membership of these committees as recommended. It seemed wise to add surgical members to the Cancer Committee.

The JOURNAL publishes each July the officers and committees elected for the year, the names of the chairmen of the various committees and their personnel.

Attention, Chairmen of Committees!

Necrology

Frederick Wilmot Mann, Houlton, 1868-1932



After his well-deserved and successful Presidency of the Aroostook County Medical

Society, Dr. Mann naturally became a prominent candidate for the Presidency of the Maine Medical Association, an office to which he was chosen for 1925, and which he filled in an exemplary and efficient fashion.

The long and varied career of Dr. Mann in medicine reads in this brief fashion. Born May 18, 1868, in Bailli, New Brunswick, the son of Thomas Andrews and Sarah Gilman Mann, he was thoroughly educated in the Horton Collegiate Academy in Nova Scotia. He obtained his medical degree in the University of Maryland Medical School in 1892. Some years later he studied postgraduate for a special degree at the University, Bishop's College in Montreal, graduating a second time and *cum laude* in 1900. He practiced medicine first in the small village of Monticello, eight miles from Houlton, and after a success of eight years he moved into Houlton, joining in partnership with a friendly physician, Dr. John G. Potter, an intimacy continuing for life. There is also mention in his papers of a postgraduate course at Boston University, all of which studies revealed a mind bent on keeping well posted in medical practice, always.

The few medical papers of Dr. Mann exhibit skill in writing, and in exploiting his

topic chosen for thought. He was also the writer of many delightful letters to your Necrologist, exhibiting, at the same time, his genial personality and the state of affairs in medical Aroostook, as well as in the medical center of Houlton. He was active in school affairs in both of his places of practice, and chairman of the School Board of Houlton for many years. He was a Mason and Odd Fellow, and a club man, interesting to meet, a most agreeable companion in conversation and opinions.

He married Miss Ina N. Baird, of Woodstock, New Brunswick, who, with a daughter, now survives his loss—a loss to medicine in Maine, deserving of all that has been said of him in our JOURNAL.

J. A. S.

County News and Notes

Androscoggin

The Androscoggin County Medical Society held a special business meeting on Tuesday, June 14th, at the Central Maine General Hospital, Lewiston, to consider the tuberculosis clinics sponsored by the Maine Public Health Association for Androscoggin County.

Aroostook

At the annual meeting of the Aroostook County Medical Association, it was voted to prepare resolutions on the death of Dr. Frederick W. Mann, a valued member of the Association.

In Memoriam

FREDERICK W. MANN, M. D.,

1868-1932

With profound sorrow the members of the Aroostook County Medical Association record the death of one of their most respected and proficient members, Frederick Wilmot Mann, on June 16, 1932.

Born in Baillie, New Brunswick, May 18, 1868, the son of Thomas Andrew and Sarah (Gilmore) Mann, he early in life decided upon the study of medicine. He was graduated from the College of Physicians and Surgeons of Baltimore in 1892, and in 1900 from the University of Bishop's College in Montreal.

He first practiced in Monticello, Me., remaining there for several years. He moved to Houlton about 1900, where he spent thirty-two years of service to the community. Early in his professional career he married Miss Ida H. Baird, of Woodstock, N. B., who, with one daughter, Dorothy, survives him. He also leaves two brothers, Andrew E., of Houlton, and Thomas B., of St. Stephen, N. B.

Dr. Mann was a Past President of the Maine Medical Association and the Aroostook County Medical Society, and stood high among his colleagues as a skilled and experienced practitioner. He was also a member of the American Medical Association, the British Medical Association, Council of Physicians and Surgeons of New Brunswick, and a Fellow of the American College of Physicians.

Besides his great interest in his profession, he also gave freely of his time to civic affairs. He was a valued director of the Aroostook Anti-Tuberculosis Association, a member of the Houlton Board of Education, and a member of numerous fraternal organizations.

Dr. Mann's life was truly one of service. Always ready to share the burdens of those about him, he was a friend to rich and poor alike, and his counsel was always eagerly sought. His kind heart and ready sympathy for those in trouble won for him a permanent place in the affections of all privileged to know him. He was never too busy to pause awhile to chat and ease the asperities of life with his timely flashes of humor.

Although always leading a strenuous life, Dr. Mann somehow found time for the contacts with the great souls of the past and present that books make possible. Probably there is no surer index to a man's character than his choice in books, and Dr. Mann was continually delving deep into the world's treasures in philosophy, history, science and literature. To him no day was complete unless some part of it had been spent in the study of medicine.

As his colleagues, we feel that his life has been an inspiration to all members of our profession, and will always serve as a constant reminder of the inestimable privilege of doing good to our fellow men.

The members of the Aroostook County Medical Society therefore desire to place on record their appreciation of the upright character, sterling worth, and outstanding ability of Dr. Mann, and extend to his family and innumerable friends their deepest sympathy.

THE AROOSTOOK COUNTY MEDICAL SOCIETY,
JOHN G. POTTER, } Committee
T. S. DICKISON, } on
F. W. MITCHELL, } Resolutions.

Hancock

A meeting of the Hancock County Medical Society was held on Wednesday evening, July 20, at 8.00 o'clock, daylight saving time, at the Malvern Hotel, Bar Harbor.

The following program was presented:

"Treatment of Head Injuries," by Dr. E. H. Risley, of Waterville. Discussion opened by Dr. Allan Woodcock, of Bangor.

"Modern Treatment of Diseases of the Blood" (illustrated with lantern slides), by Dr. Frank Hunter, of the Massachusetts General Hospital, Boston.

A buffet lunch was served.

G. A. NEAL, *Secretary*.

Somerset

A special meeting of the Somerset County Medical Association was held at Dr. Young's cottage, Lake Wesserunsett, June 30, 1932.

The meeting was called to order by the President, Dr. E. L. Hutchins. Dr. E. D. Merrill and Dr. W. E. Kershner, President and President-elect of the Maine Medical Association, were present in their official capacity.

Dr. Merrill spoke interestingly about the so-called cults from a legislative standpoint. He stressed the fact that it was difficult to get a measure enacted, because the layman is apt to feel that all opposition from the medical profession is tinctured by selfishness. He urged that great effort should be made to educate the public to help eradicate the contagious diseases. Tuberculosis clinics should be encouraged and better co-operation with those who are active along these lines.

Dr. Kershner spoke of medical organization. He said the state association is as successful as the county association makes it. The delegates should be instructed and be ready to represent their county association in the house of delegates. The problems of the county association can reach the state association in no other way.

Following these remarks Dr. G. R. R. Hertzberg, of Stamford, Conn., read a paper on the use of camphor oil as an antiseptic in first aid dressings and in the treatment of burns, ulcers, bed sores and like conditions. Dr. Hertzberg was an interesting and forceful speaker and was listened to with much interest. He explained his technic in the use of the oil without the use of skin grafts.

At the close of the meeting the hostess, Mrs. Young, furnished a delightful lunch.

Doctors present: Dr. E. D. Merrill, President Maine Medical Association, Dover-Foxcroft; Dr. W. E. Kershner, President-elect, Bath; Dr. Marston, North Anson; Drs. Young, Lord, Brown, Stinchfield, Skowhegan; Drs. Milliken, Norris, Gilbert, Madison; Drs. Robinson, Shaw, Fairfield; Dr. Smith, Norridgewock; Dr. Ellingwood, Athens; Dr. Moulton, Hartland; Dr. Hertzberg, Stamford, Conn.

C. A. MOULTON, *Secretary*.

Correspondence

June 23, 1932.

DEAR DR. DAVIS:

I have received, *with much pleasure*, the fifty years' service medal.

I regret exceedingly that I could not attend the annual meeting at Rangeley.

Yours sincerely,

EBEN ALDEN.

PORTLAND, MAINE, June 24, 1932.

DEAR DOCTOR DAVIS:

I received, with much pleasure, the nicely inscribed medal which the Maine Medical Association awards for fifty years' service as a physician. It is a fine souvenir.

I regret that my failing eyesight and hearing made it too difficult for me to be present at Rangeley.

Please extend my thanks and good wishes to the Maine Medical Association.

Yours truly,

C. F. BAKER, M. D.

June 23, 1932.

DEAR DOCTOR DAVIS:

I enjoyed the days spent at Rangeley Lake Hotel. I met two of the men who were in medical college with me and enjoyed talking over medical school days.

I was especially impressed by the Conferences held Thursday and Friday mornings. If your Association decides to continue these, it will increase the interest of the meetings and the service rendered its members. From being just another medical society, it will develop an individuality all its own. In the end, it will probably mean more time devoted to conferences and less time to papers.

Sincerely yours,

D. C. JARVIS, M. D.

June 21, 1932.

DEAR DR. DAVIS:

I wish to thank you for your kind letter of June 20th, and appreciate the resolution from the Maine Medical Association.

I am very glad that the possibility of real improvement in public health service now seems a reality.

Yours sincerely,

WM. TUDOR GARDINER.

CAMDEN, ME., June 14, 1932.

THOMAS A. FOSTER, M. D.,
Chairman, Committee on Medals

DEAR SIR:

I had hoped to be in attendance at the meeting of the association at Rangeley, but find at the last moment that I cannot be present.

I wish to thank the committee and thro' you the fellows of the Maine Medical Association for their kind remembrance of me, and I assure you that I appreciate the honor very much.

I hope to meet with you all next year.

Yours sincerely,

C. E. WASGATT, M. D.

Notices

The eleventh annual session of the American Congress of Physical Therapy will be held September 6, 7, 8 and 9, 1932, at Hotel New Yorker, New York.

The American Board for Ophthalmic Examinations will hold an examination in Montreal on Monday, September 19th, 1932, at the time of the meeting of the American Academy of Ophthalmology and Oto-Laryngology.

Necessary applications for this examination can be procured from the Secretary, Dr. William H. Wilder, 122 South Michigan Avenue, and should be sent to him at least sixty days before the date of the examination.

WILLIAM H. WILDER, *Secretary.*

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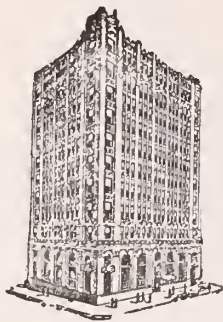
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Maine Medical Journal

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No. 8

Editorial

Although you may regard some of Dr. Bloodgood's statements in the brief article appearing in this number as a bit optimistic, we commend it to your careful and thoughtful reading. It is timely, and forcibly brings to our attention the decided advance which has been made in recent years in fighting cancer.

It is our belief that there are still too many medical practitioners who regard cancer as practically hopeless, and through ignorance or indifference of the facts of how very much may be done to prevent, to relieve, and in many cases cure the disease, are not doing their full duty. We believe that cancer has been definitely placed among that class of human troubles which can be prevented and cured. Fear is perhaps the most dreadful member of the family of diseases. Fear of cancer is a real curse and a potent enemy to health. Fear is fostered by ignorance; knowledge dispels fear. Stimulated by Dr. Bloodgood and men of his kind, men of our profession should use every opportunity to spread the truth about cancer. It no longer spells despair and is not synonymous with death.

Our Medical Journal Exchanges

It seems to us a good idea to inform our readers that in the office of the MAINE MEDICAL JOURNAL and in the library adjoining a large number of medical journals from as many as thirty states in the Union are available at all times to medical men to read and think about. These magazines can be borrowed or read on the spot. More use, we insist upon it, should be made of these exchanges. They keep us up-to-date as to American and foreign ideas and methods and thoughts on modern medical and surgical progress. We commend, for instance, regular reading of the *British Medical Journal*, and the journals of New York, Illinois, Indiana and other states are of great value. Thus in the June 18th number of the *British Medical* we read a most promising paper on the abatement of the smoke nuisance existing all over the civilized world and a historical note on the obesity of good old Henry VIII. The annual address of the President of the Illinois State Medical Society, in their June number, is really noteworthy, with its frank statement of the causes of depression of the day and valuable remedies suggested. Then the *New York*

Journal has every fortnight a number of small items of great value, for instance, in cases of malpractice, whilst an item on big fees in California, on page 768, demands attention from all practitioners. Last of all, at this time we notice a brief account in the *New England Medical Journal* of a small epidemic of tonsillitis arising from a single cow in Topsfield, Mass.

Again we say, fellow members, widen your outlook by making closer acquaintance than of old with the files of the foreign and state medical journals on file in the office of our MEDICAL JOURNAL and the medical library adjoining.

This office will gladly assist you in locating special articles and magazines.

The *Bulletin of the College of Surgeons* for June has a valuable paper on hospital libraries, with suggestions for using books on hand and for buying others. It is worth knowing, for instance, that the starting cost of such a library amounts to nearly \$5,000.00. This paper gives us a list of desirable books and magazines. *No hospital library, it is*

asserted, can be wholly carried on without a salaried librarian. Just as in a public library, most readers have to be directed to the books worth knowing and reading. It is suggested for a small library that without a catalog the books can be arranged alphabetically, as, for instance, Anatomy, Bacteriology, Dermatology, and so on.

How sad it is to recall the melancholy fact that Portland and other centers have so many times built up the nucleus for a standard medical library only after a time to see it scattered to the winds for lack of a guiding soul in the shape of a paid librarian.

Some good women of Augusta, working with the Maine Public Health Association, have established and are financing a notable and worthwhile institution at China, Me. An abandoned church houses a group of boys and girls, contact cases of *childhood tuberculosis* are being cared for and put on the road to health.

We consider this a wonderful use for an abandoned church building, and this one is without question still carrying out the Christian tradition of good works.

*Cardiac Surgery

By ELLIOTT C. CUTLER, M. D.

Professor of Surgery, Western Reserve University School of Medicine
Moseley Professor of Surgery, Elect, Harvard University

I have been asked to speak to you about the surgery of the heart, a field in which I have had a chief interest for many years. It is not a field which will stimulate much work in a similar channel among the general profession, and yet it is one in which you may have some interest, and for an occasion such as this it may serve a useful purpose. This topic must seem a rash one to many, and the pure physicians will be horrified to learn that the surgeon, who has laid hand on

organ after organ, has now approached the heart, the single viscus which the internist might have hoped would remain entirely under his care and direction. But it is a mistake for any of us to believe that a single form of therapy may be used for the disorders of any organ. Some diseases of the kidney are best treated with the knife, others with medicine, and still others with dietary regimen. The same is true of all parts of the body. No single method of therapy is appli-

*Presented before the Maine Medical Association, Rangeley Lakes, June 17, 1932.

cable to all the diseases of any one part. What, pray, can the physician do for a stab wound of the heart or what can he do for a pericardium slowly constricting under inflammatory stimulus until it veritably squeezes the heart to death? These are surgical problems. The entry of surgery into the treatment of disorders of the heart, though it may be useful in only a small fragment of the troubles of this great viscus, will surely add increased knowledge to medical science, and thus in the long run be beneficial even if the amount of relief to be given by surgery is limited and of use in but a few of the diseases of the heart. The surgery of the heart must include also the surgery of the pericardium, since the functions of the two are interdependent.

There can be no quarrel about the use of surgery for patients with *injuries of the heart*. There can be no other remedy. The thing that the medical profession should realize is that small injuries to the heart, such as come from small, sharp instruments—usually knives, but sometimes even the aspiration needle—may cause but a small leak from the ventricles, auricles or coronary vessels. Thus it may be many hours before the blood, which is slowly passing during systoles into the pericardium, reaches a sufficient quantity to increase the intrapericardial pressure to the point where enough pressure is exerted on the venæ cavæ to prevent their remaining patent. When such a condition is reached no blood will enter the organ, and finding itself without nourishment, the heart will cease its function. The secret of the treatment of injuries to the heart is to recognize the signs of this increasing intrapericardial pressure. It is represented in its most simple form by falling blood pressures, increasing venous pressures, weakened and muffled auscultatory signs and gradual failure of the circulation. To the intrepid surgeon who is faced with operating on such a case the advice to be given is that as soon as he has opened the pericardium he must be prepared immediately to find the opening and secure it from further bleeding, for once he has

reduced the intrapericardial pressure blood will enter the heart and within a few beats this organ will recover its normal powerful contractions. Therefore, unless the surgeon has secured by a finger tip or with a suture the opening from the ventricle or auricle, he may be faced with the difficulty of operating in a swirling, foaming mass of blood, a situation which is truly terrifying. No surgical procedure requires greater equanimity than the picture I have just painted, but before leaving this matter I wish to reassure the surgeon. The first operation on a wound of the heart was performed in 1895. Within ten years statistical studies showed 38% recoveries in one hundred and sixty cases. The last statistical study which we compiled, in 1926, showed that of the cases operated upon between 1920 and 1926, 78% recovered. Here are comforting figures, for one has but to imagine that preceding 1895 all cases probably succumbed. Of course these figures deal only with cases that have gone to hospitals, and these figures by no means represent the mortality rate for all wounds of the heart. The majority of these patients doubtless die before any physician reaches them, let alone their ability to survive long enough to reach a hospital.

Another field for recent surgical endeavor in relation to the heart is the *surgical treatment of angina pectoris*. Surgery in the therapy of this disorder is not based on any intention to cure the disease, but merely on the desire to bring comfort to the patient. It is in line with the surgical treatment of another painful syndrome, *tic douloureux*. Elaborate studies and many different operative procedures carried out since the suggestion of François Frank, in 1899, that surgery might give relief in angina pectoris have boiled down to a consideration of an attack upon the sympathetic nerve fibers that innervate the heart. It is felt that these fibers offer the only mechanism by which stimuli which might arise in the heart could reach the central nervous system. Impulses which pass up the various branches of the sympathetic nerves, known as the superior, middle

and inferior cardiac nerves, can reach the central nervous system only via the upper thoracic sympathetic ganglia. Various procedures for extirpating the sympathetic chain in the neck, and the stellate and other upper thoracic sympathetic ganglia have been carried out. More recently injection with alcohol of the upper thoracic ganglia has been proposed as equally efficacious and less dangerous to the patient than the surgical extirpation of the ganglia. It is not our purpose here to review in detail all of these procedures nor the results. From my own experience, I am convinced that in that form of angina pectoris in which coronary sclerosis is not a major factor considerable relief may be gained, in a large majority of the cases, by a surgical procedure. Our difficulty lies not in the technical procedure, which is relatively simple, but in selecting the case in which there is not marked disease of the coronary vessels. When our clinical acumen has been advanced to a point where we can select from those people who have precordial cardiac pain a group in which possibly spastic seizure of the coronary vessels occurs, such as occurs in the extremities in Raynaud's disease, and in whom there is little coronary disease, then we can predict a great percentage of cures or permanent relief in this particular group of cases.

Another field of surgical endeavor in relation to the heart is the possible value which may accrue in cases of *mitral stenosis* if the stenotic valve can be enlarged. This is a procedure originally proposed by Lauder Brunton in 1902, but it is a thought that must have occurred to thousands of physicians who have seen at the autopsy table young individuals apparently entirely normal except for the narrowing of the mitral orifice. It is a problem to which I began to apply myself in 1917. There were, of course, great technical difficulties to be surmounted, but I am a firm believer in the theory that if a procedure is logical and offers a real reward the technical difficulties are always surmountable. As a matter of fact, there were certain guideposts in this work, for our phy-

siological colleagues for a generation had been creating experimental lesions of the valves in animals and studying alterations in the circulation imposed by their actions. Moreover, apparatus for safe anesthesia with an open thorax had already been established, and we had before us the technical information derived from experiences in the surgical treatment of injuries of the heart as well as from certain surgical procedures on the infected pericardium.

The opportunity to operate upon a human case came in May, 1923. The patient was a girl of eleven. She was bed-ridden, orthopneic and greatly cyanosed, and had been on the danger list of a hospital for some two weeks with the family sitting by her bedside. After elaborate study she was operated upon and survived the ordeal to live four and a half years in relative comfort, finally dying with pulmonary congestion and a secondary pneumonia. At the autopsy it was obvious that surgical procedure had enlarged the mitral orifice, and it seems justifiable to think that in this particular case very great benefit was given to the individual. We had elected to utilize a medial sternal incision reaching from the upper sternum almost to the umbilicus, a large cut, to be sure, but, being in the mid-line, one that spared both blood vessels and nerves. Moreover, it allowed us to open the thorax as a book is opened without entering either pleural space. At the time this operation was done we utilized a long-handled, slender knife like a tenotome, which was thrust into the left ventricle and then pushed up into the mitral orifice. Because of the difficulty of cutting a calcareous and thickened valve, we gradually developed an instrument which we called a cardiovalvulotome and which would excise a segment of the valve and remove this from the blood stream.

Since that time we have attempted six other cases and three cases have been tried by other surgeons. Only one has survived the ordeal and this one was operated upon by an Englishman, Souttar. In this case the valve was attacked from the auricular side,

found not greatly stenosed, and therefore no intracardiac procedure was carried out. No other case has survived longer than six days, but none have died on the table, signifying that the operative ordeal can be borne by the patient provided that at the operation the circulation may be benefited. It is my fear that in our later cases we excised too large a fragment of the valve, thus suddenly reversing nature's process and putting too great a strain on a small left ventricle incapable from disuse of handling so much work. The hypothesis that a reduction in the mitral valve is desirable is still tenable, and we are searching for a method by which, even possibly by multiple operations, the valve can be gradually enlarged in size, thus allowing nature to adapt itself slowly, as nature always does, to a new set of circumstances.

Finally, we come to the *surgical treatment of pericardial affections*, and herein possibly lies the greatest application of surgery to diseases of the heart and pericardium. In the first place, we have the surgical drainage of cases of *acute pericarditis*. These are largely the resultant complications of a pneumococcus infection or a streptococcus infection, though from time to time they may result from injury of the pericardium, such as may occur with a stab wound which does not enter the heart. In such a case bacteria may be carried in and establish simple suppurative inflammatory disease. In all such acute conditions, simple drainage of the pericardial cavity will usually result in recovery. The operation can be done under local anesthesia and consists in no more than the removal of the fourth and fifth costal cartilages and opening the pericardial cavity. Antiseptics should not be used to irrigate the cavity, since they have been proven to have a deleterious effect upon the intrinsic nervous apparatus of the heart. It may be of interest to some to know that John Riolan, in 1649, proposed drainage of the pericardium for suppurative pericarditis, though there may be surgeons here to-day whose medical colleagues have refused to let them attempt drainage of the pericardium even

when such cases are recognized and proven by pericardial puncture, for fear of the gravity of the ordeal.

Finally we come to the *treatment of chronic adhesive pericarditis*. Here is a condition, the end result of chronic inflammatory disease, possibly either post-rheumatic or tuberculous in origin, in which the pericardium becomes greatly thickened, sometimes densely adherent to the heart, sometimes glued to the anterior thoracic wall, and sometimes so changed that actual bony and calcareous deposits take place in the thickened pericardium. These patients show the effect of interference with free cardiac action, that is, general circulatory failure. In its marked condition it results in the outpouring of fluid from the venous circulation with ascites and hydrothorax. Later there may result dependent edema. In its final stages this is the syndrome known as Pick's disease or polyserositis.

Brauer, an internist of Marburg, in 1902, after careful study of the syndrome produced by adherent pericardium, persuaded his surgical colleagues to remove a part of the bony thorax overlying the heart in the hope that by freeing the heart from this oppression it could carry out more easily its normal actions. This simple operation of removal of a few of the ribs overlying the precordial area is known as the Brauer operation or cardiolysis. It has been largely popularized in Europe, and through its use a considerable number of patients have been greatly benefited. In the United States the operation has been but rarely performed, it would seem largely because the condition of an adherent pericardium is not recognized by the general practitioner nor even by the internist who may specialize in disorders of the circulation. It may be briefly stated that in any case of a failing circulation without valvular disease or marked evidence of coronary disease cardiopericardial adhesions must be suspected and ruled out before the case is simply relegated to that great mass of cardiac patients who are to be given rest and digitalis. Of great assistance in

reaching the diagnosis are (1) the fixation of the heart and its failure to shift with change of position as seen under the fluoroscope, (2) the obvious other signs of fixation to the chest wall such as retraction in the interspaces posteriorly known as Broadbent's sign, and (3) the rise in venous pressures which indicates embarrassment to the ingress of blood into the heart.

Even as long ago as 1898, before the days of Brauer, Delorme, a Frenchman, suggested removal of the adherent pericardium itself, and this operation, called decortication of the heart, is now becoming a more frequent procedure than is commonly recognized. It would even now appear that the simple operation of the removal of a few ribs overlying the heart had, perhaps because of its simplicity, deceived people as to its efficacy. If the pericardium is squeezing the heart and interfering with the entrance of blood into the heart, removal of a few ribs overlying the organ will not benefit the situation greatly, and it has been shown, largely through the experimental work of Dr. C. S. Beck in our clinic, that removal of the pericardium itself, or at least its anterior portion, allowing the heart greater freedom of action, is the more desirable procedure. In our laboratories in Cleveland, Dr. Beck has been able to reproduce experimentally adhesive pericarditis and has shown that when this condition is reproduced in the animal Pick's syndrome or polyserositis is called forth with hydrothorax, ascites, dependent edema, and even a thickening of Glisson's capsule, a matter to which Pick himself devoted great thought in his original publication. In animals in whom an adherent pericardium is thus thoroughly established, removal of the pericardium results in disappearance of the edema and the polyserositis. That the same results can be achieved in man we are assured, since in our own clinic a bed-ridden, water-logged, orthopneic boy of fourteen years was restored to an active life by removal of the anterior portion of his pericardium. This case is to me to-day one of the most outstanding examples of the

restorative powers of intelligently directed surgery.

Even more recently we have had another pericardial experience which is of considerable significance and interest, and which may re-open the whole matter of the treatment of tuberculous pericarditis. A colored patient of forty-four appeared at the clinic with apparently a primary tuberculous pericarditis—at least there was no evidence of an active focus elsewhere in his body. In view of the fact that the ascitic form of peritoneal tuberculosis is benefited in a certain percentage of cases by laparotomy, and because of the accepted opinion that a certain percentage of the cases of chronic adherent pericardium are the end results of tuberculous pericarditis, we felt it justifiable to propose removal of this patient's pericardium from the viewpoint both of prophylaxis and of therapy. The most interesting pre-operative findings in this case were those which related to general circulatory failure, and, in particular, to the high venous pressure readings. The silhouette of the heart and pericardial shadow as seen in the X-ray examination established the diagnosis even before it was proven by needle exploration and the finding of organisms in the pericardial fluid. In this case fully a half of the pericardium was removed and the wound closed without drainage. Eventually a small opening occurred in the upper limits of the wound, but now this has almost healed, and eight weeks after the operation the patient is afebrile, up and about, and the tiny sinus into the pericardial area seems closed. In particular the patient shows great benefit to his circulatory apparatus, as evidenced by the fall of his venous pressures to a practically normal level.

This, then, is a brief summary of the surgery of the heart and depicts a field for surgical endeavor now fully opened for further investigation and enlargement. It includes the care of wounds of the heart and pericardium, the possibility of surgery being useful in the treatment of certain cases with angina pectoris and mitral stenosis, and

finally the surgical treatment of certain acute and chronic pericardial afflictions. It is perhaps the last field for the surgeon to approach, and it is no secret that the weight of the common, conservative attitude of medical practice will make it difficult for the surgeon to enter into the field, let alone the great technical difficulties which confront the surgeon, but it is a logical movement and the final step in destroying forever the still strongly-rooted feeling that certain viscera may well be set aside for a certain therapy or given to certain specialists. In every part of the body there are disorders some of which require drug therapy, some surgical therapy, and some merely that greatest medicine which we of the profession can give—sympathy and optimism. The internist who is interested in diseases of the kidney does great harm, both to himself and to his patients, when in a questionable case he fails to have a consultation with a competent urological surgeon. So the day will come when the internist specializing in disorders of the circulation will

equally fail in his duty toward his sick patient when he, too, neglects to call in the cardiac surgeon for consultation.

I once knew of a professor of medicine who demonstrated a case of streptococcus pericarditis on a Wednesday morning to his students as a practically fatal lesion. The next Wednesday morning his surgical colleague presented to the same class the same case as one of simple suppurative pericarditis cured by surgery. That was not a comfort to the professor of medicine, but the latter had been brought up in a school that closed its eyes to anything but what was taught in his day in a medical school. In no field of life have there been greater steps forward than in the realms of applied biology, and, particularly, recently in that fragment of this division known as medical practice. The physician, tired as he may be from his daily rounds, cannot neglect to keep abreast of the advances in his field if he is to give full benefits to the people who trust him with their lives.

**The Effect of the Workmen's Compensation Act Upon Industrial Surgery in New England*

By STEPHEN A. COBB, M. D., Sanford, Maine.

In the last twenty or twenty-five years—or the era known as the machine age—industrial surgery has made rapid progress in taking care of the injured employee, and also in the prevention of accidents.

So many accidents were taking place that it was necessary to formulate the Workmen's Compensation Acts in the various states. With the establishment of these acts, this necessitated that corporations should, for their own protection, carry insurance. In the early days, then, of compensation and insurance, accidents were still galore, and the one cry was "More production." But after the corporations found that their insurance rates were directly in proportion to the

number of accidents, and especially the "lost time" accidents, then the corporations established "Efficiency Boards," "Safety Managers," "Safety Meetings," etc., so that now no accident, however trivial, is passed by without investigation.

Kessler, in the preface of his book, "Accidental Injuries," says: "Industry at large has realized that individuals solely can no longer be charged with the responsibilities for accidents, since their responsibility lies in the very nature of the structure of industry itself, with its high speed production, complicated machinery, monotony, fatigue, and lack of proper safeguards. Industry has therefore eliminated the question of

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negligence and with it the question of damages for accidents which occur in its routine work, and has substituted for it principles of insurance and replacement of wages lost as the result of accident."

The Workmen's Compensation Act was adopted in the various New England States in the following years: Massachusetts in 1907, New Hampshire in 1911, Rhode Island in 1912, Connecticut in 1913, Maine and Vermont in 1915. All state compensation laws require complete surgical treatment of the injured until he is rehabilitated. The compensation law in the State of Maine is not compulsory. The employers of the State of Maine have the choice of being self-insured, insured with a mutual company, or with a stock company. There is no law in the State of Maine that requires any of its industries to provide first aid to its injured. New Hampshire is the only state in the Union that allows the employer to elect his own method of settlement after an accident.

The Workmen's Compensation Act of the State of Maine went into effect in 1916. Since then, the average number of accidents reported yearly has been about sixteen thousand, and about five thousand of these go to compensation, in other words, losing time beyond the waiting period, which, in this state, is seven days. Approximately one-third of the reported accidents in the state result in the payment of compensation. They vary, of course, from one day to permanent total disability. There has been an average of approximately fifty-two deaths a year through industrial accidents since 1916. Safety campaigns in this state have shown improvement. For example: In the St. Croix Paper Company of Woodland, prior to September 1, 1929, over a five-year period had an average of one hundred and twenty-five accidents per year. In fourteen months, from September 1, 1929, to January 1, 1931, they had just four accidents. The fact that they had changed from insurance carriers to self-insurers made it possible for them to take care of the accident cases with their

income, or from the fund which originally had to be paid yearly to the carriers.

Some of the plants in the state which have had a large reduction of accidents are the Sanford Mills and Goodall Worsted of Sanford, Burnham and Morrill of Portland, Bath Iron Works, Lawrence Portland Cement of Thomaston, Eastern Manufacturing Company at Bangor, International Paper Company at Livermore Falls, Oxford Paper Company at Rumford, and a large number of other plants. Safety campaigns in these plants have realized a very decided cut in the overhead, through a reduction in injuries to their employees.

Massachusetts has a Department of Industrial Accidents, which has now been in existence over nineteen years. One of the divisions of this department is known as the Medical Division, which has been in existence for about eight years. One of the big problems that this division has to contend with is the reasonableness of the charges of physicians and hospitals in disputed cases, adequacy of the treatment provided, additional treatment beyond the first two weeks after the injury, whether the employee's incapacity for work as a result of the injury had terminated in whole or in part, and other medical questions. Impartial physicians are appointed by the members of the board. During the year covered by the 1929 report, three thousand, three hundred impartial examinations were made. Massachusetts also has a Department of Industrial Safety. One of their big problems is safeguarding machinery to prevent accidents. That much has been done to stop machinery accidents is shown in their figures over a ten-year period. In the year 1919, 18,490 machinery accidents were reported, while in 1929, ten years later, there were only 7,817 machinery accidents.

The consensus of opinion is that the employer of a large number of men is able to meet and solve the accident prevention problem far better than the employer of a few men.

Statistics show that 45% of the injuries are of upper extremities; 25% of the injuries are of lower extremities; 20% of injuries are of trunk, and 10% of injuries are of head, face and neck.

It is interesting to note the effect the recent business depression has had upon industrial surgery. There are less accidents. This would be expected, with the corporations all on short time, and with cities and towns having so many unemployed. However, the insurance company notices that the medical cost on the "no lost time" accident has increased. If I may illustrate this condition as it exists in our local mills, it is easily explained. Both of our big textile plants have been on short time for three years or more. The town is full of unemployed. If a man who has a job gets a minor injury, he stays at work for fear he will lose his job, although he may have an injury that requires a dozen or more dressings. The fellow, however, who has to stay out his seven days before he begins to draw compensation seems to immediately find a disability that sometimes lasts weeks and months beyond the surgeon's estimate. Especially does this seem to be true of the back injuries. How many of these back cases, especially the sacro-iliacs, are really psychic or due to malingering, it would be impossible to say. Another problem is the old man and his injuries that so many times become a permanent total disability, because of a pre-existing arthritis or cardiorenal condition.

For the purpose of illustrating the amount of money spent by the industries of New England for protection, I have taken the reports of the Insurance Commissioners for the year 1929. This is the last year that full reports from all the states could be obtained. It also is a good year for statistics, because industry had not then been hit by the depression that has come in the last two years.

The amount of premiums paid by the industries was a little over twenty-five million dollars. This, of course, does not include the

self-insured industrial plants. The amount of claims paid was about seventeen million dollars, which left eight million dollars for the insurance companies. Now, seventeen million dollars must be split two ways—compensation to the injured employee, which was about ten and one-half million dollars, and medical bills of about six and one-half million dollars, which, of course, included hospital bills, nurses, dressings, medicines and doctor's fees. As near as it is possible to estimate from the statistics taken for the year 1929, the injured received 40%, medical bills amounted to 25%, and the insurance company received 35% of every dollar expended by industry in premium.

The number of industrial accidents reported in 1929, in the New England States, was 252,863, and the number of deaths 620. I regret that I could not obtain statistics of accidents and deaths in all of the states for the year 1919, to show the improvement over a ten-year period. The State of Massachusetts is the only one of the New England States that has records back in 1919.

Dr. J. J. Witmer, of New York City, says there are six medical factors in the reduction of the severity of industrial accidents:

1. Examination of all new employees.
2. Re-examination of all employees at definite intervals.
3. Provision of adequate first aid treatment.
4. First aid education.
5. Painsstaking medical supervision of the injured person throughout the period of his complete disability.
6. Complete rehabilitation of the patient as far as possible by proper operation to remove deformities.

Pre-employment physical examinations are increasing in frequency. Many of the larger corporations are making room for hospital clinics, where both doctors and nurses are employed either on full or part time.

One of the reasons that insurance cost is so much is the pernicious theory that the injured employee is entitled to the benefit of the doubt rather than the legal presumption

that the claimant has upon himself the burden of proof to prove compensability. Although the compensation law was placed upon the books primarily for the benefit of the injured employee, the above theory places the insurance company in a position where it must either satisfy a doubtful claim, or appeal at an approximate expense of four or five hundred dollars.

On the other hand, insurance companies, in their competition with each other, have agents who minimize accidents and extent of injury, and procure adjustments upon a basis not entirely fair to the injured person or his dependents. The amount of compensation to the injured employee is fixed by law. The cost to an insurance company in operating upon industrial accident cases is somewhere between 30% and 40%. The only way that the employer's premium can be lowered is by reduction in the medical cost.

Standardization of fees by the insurance companies, in my opinion, would stop a lot of the so-called "kicks" against the high medical cost. It would also allow more medical men in on industrial surgery. In some states, the question of medical fees is arranged by statutory provisions. In my opinion, the insurance companies should provide definite schedules which determine the exact amount to be paid for each item, these schedules, of course, to be sanctioned by the Accident Commission of its particular state. In the present system the employer and insurance company are bound to employ a surgeon who is working for their interests. The dispute seems to be over too large hospital bills and too many dressings after the injury. A medical man on the Industrial Accident Commission, or a Medical Commission, would be of great service in settling disputes, not only as to the amount of disability to the injured, but also as to fairness of medical bills. In the State of New Jersey, the reasonableness of a bill in dispute is passed upon by a specially designated committee, composed of the medical adviser to the Compensation Bureau, a member from

the State Medical Society, and a representative of the employers.

Another big problem is getting the old man back to work. A man over sixty is much more prone to accidents than the young man. He gets a "back strain" at his work, and, coupled with an old arthritis of the spine, hypertension or arteriosclerosis, he becomes a permanent disability case, and a load on the insurance company. There is also a great discussion upon hernia—whether or not it is compensable. Some states have ruled that hernia is not an accident. Many industries throughout the New England States have pre-employment examination. If they find a man with large loose inguinal rings, or any signs of hernia, he must sign a statement freeing that particular industry from any liability in case that he gets a rupture while working for them.

The rehabilitation problem is a serious one. Large manufacturing concerns that have a variety of work in their plants generally find work of some kind for the crippled or partially disabled men. They all seem to consider that this is one of their moral obligations. There are, however, a large number of employers who think that after they have paid their premium for protection they have discharged their duty, and are disposed to let the insurance company worry. Now an insurance company has no method of securing employment for the partially disabled and consequently has this burden over a long period of time. In the long run, this costs the above class of employers *money*. Insurance companies are not in the game to lose money. Employers who do not co-operate with their insurance carriers ultimately will have to pay larger premiums, and if they seek a new insurance carrier, such insurance carrier will ascertain their history and method of doing business, and charge them proportionately. A man may have an industrial injury, receive his compensation, according to law, and be ready to go back to some kind of work, but in these days of depression, together with

his disability, finds it impossible to obtain employment.

Massachusetts has a Rehabilitation Board, Connecticut has a Vocational Rehabilitation Service. Maine, in its safety work, ranks very high among all the states. The Department of Labor and Industry has done much along the lines of safety education.

In conclusion, may I say that unless the rates are reduced by the insurance companies, the employers, through economy alone, will be driven to take their chances with

common law, outside of the Compensation Act. A large number of the big corporations of New England are now operating outside of the Act, and have found it much more economical, especially in death claims, where common law settlements in the last three years have caused an annual saving of over 80%. In my opinion, with the change in costs of living, wages, etc., the law itself must be changed, or all the employers will be swinging back to common law.

**How Is Prevention Possible in Cancer?*

By JOSEPH COLT BLOODGOOD, M. D., Baltimore, Maryland

We have proved that prevention is possible in cancer of the skin and in cancer of the mouth. All the evidence suggests that prevention is just as possible in cancer of the cervix in mothers.

The same correct information given the public, which directs them how to protect themselves against cancer of the skin, mouth and cervix, will also lead them to achieve the greatest protection from any type of cancer situated in any other part of the body where prevention at the present time is not possible.

Prevention of cancer of the skin, mouth and of the cervix in mothers rests upon periodic examinations.

The moment any individual learns the value of periodic examinations, he must learn at the same time the additional value of seeking the advice of his physician who makes the periodic examinations as soon as he or she (the patient) is warned by any new symptoms or new signs.

Once we have established in the minds of the public the real value of selecting a physician and seeking an examination while well, and of reporting to the physician the moment there is warning of trouble in any part of the body, we will have achieved the

greatest possible protection from many diseases, including cancer. It is of the utmost importance for everyone who has the intelligence to understand this message to realize that there is no other protection from cancer.

This protection from cancer, based upon periodic examinations and on reporting to a physician the moment one is warned, is practically the same kind of protection, and, in some instances, just as complete protection as is that of vaccination against smallpox, inoculations against typhoid fever, toxin-antitoxin against diphtheria, antitoxin against tetanus, etc.

We have ample evidence that it was difficult to persuade the public to avail themselves of the protection by vaccination, inoculation and antitoxin. Undoubtedly, as more of the people come to have better information in regard to health and disease, less time will be required to establish the protection by periodic examinations, and no delay will be allowed in consulting a doctor after the first warning of any trouble. The medical profession realizes that the delay on the part of the people in accepting the protection by vaccination, inoculation and antitoxins was not all the fault of the people. The inactivity and often the opposition of

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members of the medical profession delayed the full benefits of preventive medicine.

The same is true in regard to periodic examinations and reporting to a physician the moment there are any symptoms of disease.

The average individual to-day is not so dependent upon the family physician as he was fifty years ago, although fifty years ago the family physician could do very little to help or protect his patients. But at that period the family physician had the confidence of his patients, and, for practical purposes, they were all under his care for prevention or treatment.

If we can educate annually a larger number of people to accept the idea of the protection by periodic examinations, we at once emphasize the great and universal value of a medical adviser to whom one goes at intervals, no matter how well he feels and whose advice one immediately seeks when there are any warnings. At the present moment, it is not a question of evidence or of argument to establish this value of periodic examinations, it is simply a question of presenting the facts to the public in such a way that we may gain their confidence and persuade them to proper action, that is, we must establish throughout this country, and throughout all civilized countries, a new public opinion on the great value of the medical profession as the only protection against many diseases, including cancer.

The majority of educators are of the opinion that fundamental and primary education is largely a local affair. The local unit of the medical profession is the county medical society and the county health officer or department. This unit can be aided by the state medical society and health department, and these state organizations can undoubtedly be stimulated and directed by national medical societies and other organizations, also by the public health service, which is a federal organization. At the present time, with few exceptions, the least activities are on the part of the county medical and health organizations.

Meetings like the present one, in which a large number of counties from more than one state come together, can be of the greatest value in stimulating county organizations to think and act in terms of prevention.

The correct information in regard to the prevention of cancer and all other diseases is available. The greatest authorities have spoken and written. The same is true in regard to the early recognition and treatment of all diseases. Not a single doctor, no matter how isolated his position, need be out of touch with this available information by wireless, by telegraph, by telephone, by letter, by all forms of transportation for the patient, if necessary to the special doctor or clinic required.

My studies of the factors which have led to the prevention or cure of cancer prove the value of a family physician in whom the patient has confidence and to whom he or she goes for a periodic examination, or the moment there is warning.

A community can be kept best informed continuously and systematically by a combination of the county medical society and health department through their own daily press or publications of their county. Such an educational service to the public is desired by the modern journals and can be easily supplied by the local medical profession and the health department from the best available medical literature. It is meetings of this kind that can stimulate and direct the establishment of such organizations. State funds or grants from foundations can establish such centers for the protection of the people against disease by every modern method. A district in Baltimore has just been selected by a great foundation to make such an experiment. As a matter of fact, it will not be an experiment, but it will be an example to other local communities of what can be done.

We may finish this brief statement with a short summary of what can be done to-day to reduce the number of annual deaths from cancer.

No one should die of cancer of the mouth who is under the care of a good dentist. Cancer of the mouth is the result of chronic irritation by tobacco, ragged, dirty teeth and ill-fitting plates. The modern woman who smokes is not getting cancer of the mouth because she is under the care of a good dentist, keeps her teeth smooth and clean, and reports for inspection the moment she has the sensation of a sore spot or observes an unusual spot.

Cancer of the skin is absolutely a preventable disease. Observations here prove that cancer never begins as cancer, nor ever begins in a normal spot. There is first an abnormal spot in the skin which is not cancer. Any individual can see or feel that spot. The first part of any physical examination should be inspection of the skin, no matter what the nature of the patient's complaint may be. The moment any individual sees or feels an abnormal spot in the skin, the advice of a physician should be sought. No beautiful woman dies of cancer of the skin because her vanity compels her to pay proper attention to the first blemish.

Cancer of the cervix in mothers is a preventable disease. The cause and course of the spot in the cervix which leads to cancer are identical with those in the mouth or skin. The cause is chronic irritation. The course is slow. The first spot is not cancer. The spot which is not cancer gives no signs of its presence by pain or discharge, and there may be no pain or discharge until cancer has fully developed. Therefore, to protect mothers from this type of cancer, there must be, at proper intervals after the birth of a child, an inspection of the cervix by a good light, and this in the majority of the cases will lead to prevention. In addition, cancer discovered in its earliest stages by this method, before the mother has any definite symptoms, is practically curable by radium. To-day less than 10% of mothers are protected by periodic pelvic examinations. The American Association of University Women is probably doing more than any other single

organization to disseminate this correct information.

There has already been accomplished, in some localities, a tremendous improvement in the management of cancer of the breast in women. When a woman seeks advice the moment she feels anything unusual in one or both breasts, the probability of finding a lump that is cancer is less than 10%, and the probability of accomplishing a cure by proper treatment is more than 70%. When women delay six months to one year, the probability of the lump being cancer approaches 80%, and the chances of a cure are reduced to 10%.

Sarcoma of bone in children and adults can be cured by irradiation with X-rays or radium in some instances, by resection with transplantation of bone and restoration of function in others, and by amputation in other instances. The actual percentage of cures has been increased from 4% in 1920 to 30% in 1932. This improvement has nothing to do with diagnosis or treatment, but rests upon getting correct information to a larger number of people of the fact that the moment any trouble is experienced in a bone, the first thing to do is to have an X-ray taken. No matter what it is called, the first thing to do is to get a picture of the bone with the X-rays.

The partial removal of the stomach for cancer was performed by Billroth, of Vienna, more than fifty years ago. The successful cases are slowly increasing in numbers. The failure to cure more cancers of the stomach rests upon treating indigestion with diet and medicines without first looking at the stomach with the X-rays. The same is true of cancer of the colon (large bowel) and the rectum.

The moment any individual sees or feels a lump anywhere, he should immediately go to a physician for a careful examination of that lump.

The danger of cancer is not so much that it is a common disease, but that it is a neglected disease. In the future many cancers

will be detected at the annual physical examination to which more and more of us will submit just as we now do to vaccinations and inoculations. In this period the chances of prevention and cure are best. The next most favorable period is when the cancer or the spot that precedes cancer is detected within the first week or two after the first symptom.

There is no reason to fear cancer if one has a good family physician in whom he has confidence and to whom he goes for a periodic examination, and the moment any symptoms are observed.

It is a mistake to think of neurasthenia, or hypochondria, or cancerophobia in disseminating knowledge of this kind. If people must be protected by vaccinations, inoculations and antitoxins, we do not consider the phobias, and ultimately the phobias are cured as the people learn the value of these preventive treatments. The same will be true in regard to cancer.

The majority of cancer students agree that to-day the greatest protection from cancer is the education of every individual to the value of periodic examinations and of seeking an examination by a physician the mo-

ment there are any symptoms in any part of the body. A dentist can give you the best protection from cancer of the mouth; an oculist is your best protection from blindness; a careful nose and throat inspection from time to time offers you the greatest insurance against deafness; and inspection of the cervix of mothers by a good light at proper intervals after the birth of a child offers almost complete protection against cancer there. Letting a physician see at once any skin defect or any lump that is felt is the greatest protection against cancer of the skin and soft parts.

Colonel Dale, of Baltimore, Chief Surgeon of the Third Corps Area of the United States Army, has reported to the Surgeon General that 832 army women followed the advice of having a physical examination. In 22% of the women examined definite pathological conditions were found, most of which could be relieved, and among these conditions there were six examples of early cancer, five of which are curable. This furnishes further evidence of the value of periodic examination. This is reported with the permission of the Surgeon General through Colonel Dale.

Maine Public Health Association

The annual meeting of the Maine Public Health Association was held at Lakewood, Thursday, July 21st, with about seventy-five present. Mr. Henry Richards, of Gardiner, President of the Association, presided in his usual able and tactful manner. Governor Gardiner was unable to be present personally, but extended friendly greetings from the state, which were read at the beginning of the session.

Arthur F. Tiffin, Treasurer for the Association, reported total receipts for the year as \$81,449.74, and expenditures of \$74,338.80. Of this amount \$39,197.00 was expended for nursing services, while the tuberculosis clinics cost \$4,726.53.

A report of the Child Health Education

Service was given by Miss Abbie M. Buck, Director, who stated that the number of Six and Seven Point children has grown from 3,000 Six Point in 1928 to 23,000 Six and Seven Point in 1932. She also said that fifty-eight schoolrooms in the State of Maine had been presented with 100% dental "Clean Mouth" certificates, which signifies that every child in the fifty-eight schoolrooms had received all the necessary dental corrections.

Dr. Gilbert, of Portland, reported for the Eye Conservation, and stressed the importance of vision corrections for any school child with abnormal sight. The Ear Conservation Section was handled by Dr. F. T. Hill, of Waterville, who spoke of the use of the Woodman Audiometer and the duplicate in-

struments owned by other organizations. The testing of hearing may be much more correct with the use of the machine than with the whisper test.

Dr. George H. Coombs, Director of the Bureau of Health, made brief but pertinent remarks and gave a brief report of the Social Hygiene Section for the past year. Lectures pertaining to this subject have been given in the various parts of Maine and have met with the approval of the public.

The Tuberculosis Section was ably reported by Dr. C. B. Sylvester, of Portland, Chairman of the Committee; by Lester Adams, M. D., Chief Clinician, and Dr. Howard C. Hanscom, Director, State Institutions. It was the unanimous verdict that the Tuberculosis Section is doing a splendid piece of work in eliminating the disease, and more requests than ever have been received in the central office for the clinic program. Dr. Adams is preparing a statistical record of the cases tuberculin tested through the state, planning to have the findings published, so that it may help other organizations throughout the country. Dr. Forrest B. Ames, of Bangor, roentgenologist, was unable to be present, but his work in interpreting the hundreds of X-rays each year is much appreciated.

Mrs. Theresa R. Anderson, R. N., supervising nurse for the Association, gave a report of the work of that section, and finished her remarks by calling on the following M. P. H. A. nurses for three-minute reports covering their activities for the year: Julia Wilson, of Skowhegan; Katherine Noble, of Penobscot County; Mrs. Louise Nichols, of Piscataquis County; Miss Charlotte Baldwin, of York County; Miss Ada Stafford, of North Franklin County; Mrs. Flora Markmann, of South Franklin County; Miss Pauline Grover, of Bluehill; Mrs. Marian F. Oakes, Augusta; Mrs. Dorothy Cross, Dexter; Miss Moberg, clinic nurse. She also called on the indirect affiliated services: Cumberland County Public Health Association, Mrs. Katherine Dougherty; Gardiner Public Health Association, Mrs. Emmeline Hodgkins; Bangor Anti-Tuberculosis Association, Miss Mary Louise Rowe; Orono Community Nursing Service, Mrs. Annie Bartlett. These reports were interesting and

enlightening, proving the large amount of preventive health work which is carried on by this efficient group.

A report of the Mental Hygiene Section was given by Prof. C. A. Dickinson, of the University of Maine, the chairman. He mentioned the questionnaires which were sent into every town in the state and told briefly of plans for the future. Miss Ruth Nichols, R. N., one of the staff nurses, is at present taking a course at the University of Maine Summer School in psychiatry.

A report of the special committee, a branch of the Orthopedic Section, was given by Dr. Mortimer Warren, of Portland. The State Association has recently conducted a survey for infantile paralysis cases at Dr. Warren's request, with the hope that eventually something may be accomplished, so that children suffering from the effects of this disease may be returned to normalcy.

As Dr. E. G. Abbott, of Portland, chairman of the Orthopedic Committee, was unable to be present, the report of this section was not given. Another department which was not reported was the Heart Section, with Dr. E. H. Drake, of Portland, chairman.

Mrs. Alice McGouldrick, Financial Secretary, read the record of finances for the year, supplementing that previously given by Mr. Tiffin. She stated that the total sale for the Christmas seals for 1931 had dropped \$7,000. She mentioned especially the co-operation rendered by the State Departments of Health and Education; the free transportation so generously contributed by the Bangor and Aroostook and Maine Central Railroad Companies; the kindness of the Maine Medical Association, and the endorsement of the public in general when asked to assist with the program for better health for Maine.

As Dr. Gerald P. Clifford, chairman of the Dental Hygiene Section, was unable to be present, Miss Buck read his report, giving the dental corrections. The number of dental clinics reported by the M. P. H. A. nurses was 97, with attendance of 706 school children, 2,120 examinations, 11,892 dental defects and 4,208 corrections. Dental clinics are available to children in many of the cities, and in many of the rural schools of Cumberland, Franklin, Hancock, Penobscot, Washington and York Counties.

As Dr. Clair Bauman, of Waterville, was obliged to leave before the Child Hygiene Section was called upon for a report, it was necessary to dispense with the same.

The Cancer Section was reported by Dr. H. E. Thompson, of Bangor, the program for which report outlined in conjunction with the suggestions from the American Society for the Control of Cancer for the coming year.

Interesting remarks were made by Hon. Bertram Packard, Commissioner of Education; Dr. B. L. Arms, of the Commonwealth Foundation in Farmington; Miss Laura Knowlton, Maine supervising nurse for the American Red Cross; Mr. Samuel Emerson, President of the Three-Quarter Century Club, and Dr. E. D. Merrill, Honorary President of the Maine Public Health Association.

The principal speaker of the day was Dr. Clarence C. Little, of the Roscoe B. Jackson Memorial Laboratory in Bar Harbor, who spoke on the general subject of cancer. He mentioned that certain types of cancer may be cured and are being cured in all parts of the country, saying that the country owes a national debt to cancer, and we can decrease that debt not by continuing to pay human lives but by spreading information. Dr. Little spoke of two potent factors contributing to cancer: One, that it is inherent in some people—that is, some are born more likely to have cancer than others—the second is that some types of cancer are caused by chronic irritation. Dr. Little, who is in charge of the Executive Department of the American Society for the Control of Cancer, promised co-operation to the Cancer Section of the M. P. H. A. and any other interested individuals and organizations, in their efforts to eliminate this disease.

The following directors were elected for a term of two years: Dr. Charles Bell, Strong; Dr. F. Y. Gilbert, Portland; Dr. Geo. E. Young, Skowhegan; Mr. E. M. Hamlin, Milo; Dr. B. L. Bryant, Bangor; Dr. F. T. Hill, Waterville; Mr. Arthur F. Tiffin, Augusta; Mrs. Harvey D. Granville, Kezar Falls; Mrs. Harriet Fenderson, Farmington; Dr. G. A. Neal, Southwest Harbor; Mrs. A. E. Chittenden, Auburn; Mr. Bertram Packard, Augusta; Judge Albert J.

Stearns, Norway; Dr. Howard C. Hanscom, Augusta; Mrs. Peter Plouff, Dexter; Dr. Geo. H. Coombs, Augusta; Dr. Philip Webb Davis, Portland; Mr. Geo. Leadbetter, Augusta.

The following officers and Executive Committee were elected: Pres., Mr. Henry Richards, Gardiner; Hon. Pres., Dr. E. D. Merrill, Dover-Foxcroft; 1st Vice-Pres., Dr. B. L. Bryant, Bangor; 2nd Vice-Pres., Judge Albert Stearns, Norway; 3d Vice-Pres., Mrs. E. S. Woodman, Winthrop; Treas., Mr. Arthur F. Tiffin, Augusta; Ex-Committee, Mrs. J. H. Huddilston, Orono; Dr. F. Y. Gilbert, Portland; Mrs. Harvey D. Granville, Kezar Falls; Dr. Geo. H. Coombs, Augusta; Dr. Geo. E. Young, Skowhegan; Mrs. Harry Butler, Bangor; Dr. C. A. Moulton, Hartland.

The meeting adjourned at one o'clock for lunch at the Lakewood Inn. It was much enjoyed by the assembly. Immediately after lunch the people returned to the Club House, where a health play was presented. This was written especially for the occasion by Mrs. Alice H. McGouldrick, Financial Secretary. The characters were played by members of the office and nursing staff. The two scenes depicted, first, a tuberculous family in 1882, and the second scene showed the office of the Maine Public Health Association, and demonstrated modern methods of combating the disease. The parts were well taken and the play well received.

Necrology

Harry Edwin Williams, M. D., Mount Vernon, 1872-1931

We regret that, owing to a misunderstanding, the death of our comrade, Dr. Williams, occurring suddenly April 18th, 1931, has remained thus far unnoticed in the columns of our JOURNAL. This late tribute to his memory is to prove that he is not forgotten by his fellow members.

A son of Augustus and Mary Jefferson Williams, he was born in Newton, Mass., July 5, 1872, and educated in the public

schools of Newton, and for one year at Harvard University, in 1892, and later on he had a distinguished career at the Harvard Medical School. His service at the Cambridge Hospital for two years was very admirable.

He practiced first at Dorchester, Mass., for a while, but finding the climate trying to his health, and weakened by an attack of diphtheria, he looked about in Maine for an opening, which he discovered at Mount Vernon, where he settled in 1904, and remained there working steadily and faithfully to the time of his sudden death from angina pectoris. He was President of the Kennebec County Medical Society and on the staff of the Franklin County Hospital.

He was highly respected and admired, and kept in touch with all current medical and surgical advances. He set a fine example to his fellow practitioners by regularly attending the county and state medical society meetings. As a physician and friend, he was kindly, genial and sociable, and his career was honest and honorable as a man and physician.

The funeral services were abundantly attended in his church, with medical and social friends as pall bearers. He was laid at rest in Farmington.

J. A. S.

County News and Notes

Hancock

The Hancock County Medical Society met Wednesday evening, Aug. 17, at 8.15, at the Malvern Hotel, Bar Harbor.

A paper on "Obstetrics" was read by Dr. Robert Lewis, Yale University Medical School, and a historical paper on "Galen and Harvey," illustrated with lantern slides, was presented by Dr. James Hurd, Pittsburg.

G. A. NEAL,
Secretary.

Knox

A meeting of Knox County Medical Society was held Tuesday, August 9, 1932, at the Country Club, Rockland, Me.

After dinner, Dr. Norris B. Foster, of New York, spoke on "Albuminuria."

F. F. BROWN,
Secretary.

Washington

The regular August meeting of the Washington County Medical Society was held at Calais, Me., Aug. 3, 1932, at 2.30 P. M.

Speakers: E. H. Bennett, M. D., of Lubec, Me., on "The Early Diagnosis of Cancer"; C. B. Harvey, M. D., of Boston, Mass., on "Peptic Ulcers"; C. H. Best, M. D., Toronto, Can., on "Physiological Aspects of Insulin and Allied Drugs."

There were present sixteen members and six visitors.

P. J. MUNDIE, M. D.,
Secretary-Treasurer.

For Sale

The office fixtures of the late Dr. Julius Howard, of Bridgewater, Me., are for sale. Communicate with Mrs. Julius Howard, Bridgewater, Me.

A stock of drugs and medicine may be purchased at the office of the late Dr. John W. Schafer. Communicate with Mrs. J. W. Schafer, South Berwick, Me., for details.

Notices

Bone and Radiological Conference

The Bone and Radiological Conference will be held September 19-24, 1932, at the Johns Hopkins University, 34th and North Charles Street, under the auspices of The Surgical Pathological Laboratory, Johns Hopkins Hospital.

Perpetual Memorial Fund

In Honor of Dr. John B. Deaver, Surgeon,
Teacher, Humanitarian

The Aid Association of the Philadelphia County Medical Society is establishing a special perpetual fund in honor of Dr. John B. Deaver, only the income of which will be used to afford aid to needy physicians and their families. Any amount given will help in creating a fund which will be a fitting perpetual memorial.

Checks should be drawn to the order of the Aid Association of the Philadelphia County Medical Society and sent to Dr. Francis Heed Adler, Secretary, 313 South 17th Street, Philadelphia, Pa.

The Harvard Medical School Courses for Graduates 1932

Lectures and demonstrations on "Internal Medicine" at the Massachusetts General Hospital by Frederick T. Lord, M. D., Clinical Professor of Medicine, Harvard Medical School.

The course is intended for physicians who wish to review medical practice and become more familiar with recent advances in internal medicine. Each of fifteen exercises will consist of (1) the study of cases, the important features of which will be demonstrated and discussed, and (2) an informal lecture on the following subjects:

September 21, "Lobar Pneumonia"; September 28, "Acute Mononucleosis, Cerebrospinal Fever, Infantile Paralysis"; October 5, "Tuberculosis"; October 12, "Syphilis"; October 19, "Allergy, Serum Disease and Accidents, Asthma"; October 26, "Deficiency Diseases"; November 2, "Gastro-intestinal Diseases, Peptic Ulcer, Cancer, Intestinal Obstruction"; November 9, "Liver Diseases, Jaundice, Cirrhosis, Gall Bladder"; November 16, "Respiratory System, Bronchiectasis, Abscess, Foreign Bodies"; November 23, "Diseases of the Pleura"; November 30, "Diseases of the Kidney"; December 7, "Diseases of the Blood-Forming Organs"; December 14, "Diseases of the Circulation, Hypertension, Arteriosclerosis"; December 21, "Heart Disease"; December 28, "Diseases of the Locomotor System, Arthritis, Rheumatic Fever."

The exercises will be held once a week on Wednesday mornings as indicated above, from 10.30 A. M. to 12.30 P. M., September 21 to December 28, at the Massachusetts General Hospital, Ether Dome, Bulfinch Building.

Fee for the course (15 exercises), \$25.00.

The 1932 Graduate Fortnight of the New York Academy of Medicine

"Tumors, Benign and Malignant," will be the theme of the 1932 Graduate Fortnight of the New York Academy of Medicine. The medical profession of the country is invited to participate in the intensive two-week study of this important medical and surgical subject.

A full program of clinical demonstrations, lectures and conferences has been arranged to cover all phases of tumors, their diagnoses and treatment.

Concurrent with the Fortnight, and for an added week thereafter, there will be housed in the Academy building an exhibition of anatomical specimens numbering approximately 3,000 units. A number of

the sections in the exhibition will be subjected to lecture demonstrations at regular intervals.

Ten evening meetings have been arranged during which tumor growths in various parts of the human anatomy will be discussed. Among the speakers are included Doctors W. Gordon M. Myers, Edwin Beer, Charles A. Elsberg, James Ewing, Donald C. Balfour, Daniel F. Jones, Dean Lewis, Francis Carter Wood, and others.

Thirty afternoon clinical meetings and demonstrations have been arranged in eighteen of New York City's leading hospitals, including Bellevue, Lenox Hill, Presbyterian, St. Luke's, Fifth Avenue, Post-Graduate, Neurological Institute and others.

The Fortnight will be held from October 17th to the 28th, inclusive.

The profession of the country is invited to attend and to participate in the Graduate Fortnight. There is no charge for attendance at any of the clinics or meetings, but registration is required for participation in the hospital demonstration clinics.

A complete program and registration blank for the clinics and demonstrations may be secured by addressing the New York Academy of Medicine, 2 East 103rd Street, New York City.

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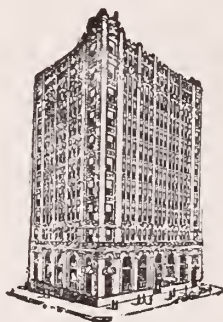
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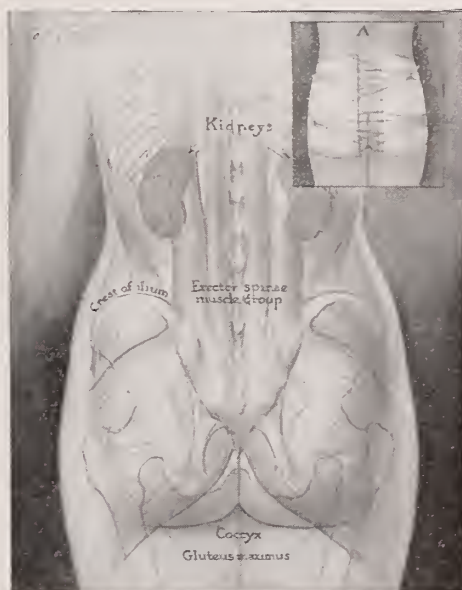


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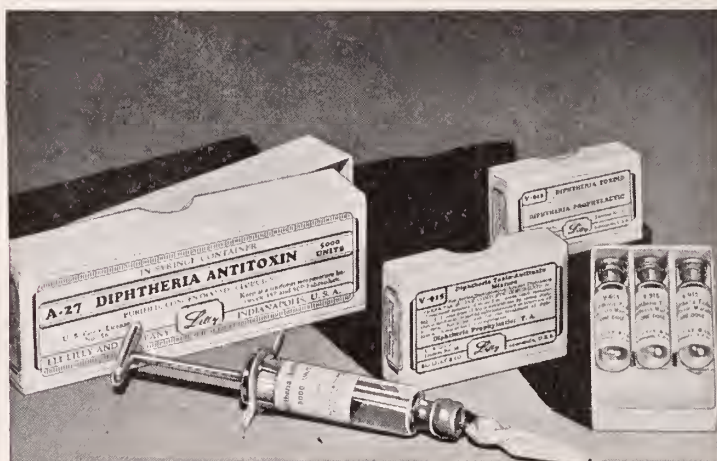
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Maine Medical Journal

The Official Organ of

The State and County Medical Societies

Vol. XXIII

Portland, Maine, September, 1932

No. 9

Editorial

The JOURNAL believes that it is good policy to encourage the medical men of Maine to write and speak on medical matters, and for those connected with our hospitals to engage actively in advertising the facilities of these institutions throughout the state.

Every hospital group by means of its staff should be a teaching center. It is inspiring from time to time to listen to men from abroad, but for the most part we should conduct our own clinics, and extend to smaller and less favored communities clinical instruction by means of members of our own association. There are to-day many Maine doctors well qualified to serve in this way. Let us develop our resources, and if post-graduate work and instruction is needed and desired in any quarter be prepared to give it ourselves.

We believe in interesting and developing in every legitimate way the medical resources of our state. Advertising on the part of the individual doctor is to be condemned, but it is proper that we make greater effort to encourage our clinicians, stand behind them and help them gain well deserved prestige in their own communities. We cannot do this by continually importing

clinicians as speakers at our county meetings and instructors at our clinics to the exclusion of home talent.

In order to foster this idea of self-development our Council at its last meeting discussed at length a plan submitted to it by the Chairman of the Scientific Committee by means of which men from our own ranks may be made available as speakers at the various county meetings. A tentative list of subjects was presented, and it is proposed when compiled to place this list with names of available volunteer speakers in the hands of each county secretary for his use in making up programs. The JOURNAL urges those interested in this plan and willing to serve as speakers to send in their names to this office or to the Chairman of the Scientific Committee, Dr. Frederick T. Hill, Professional Building, Waterville, Me.

At this time, two years ago, the people of Maine, and particularly residents of Cumberland County were visited by a serious epidemic of infantile paralysis. Throughout the fall anxiety spread and the dread inspired by this terrible affliction dwelt with us. Many parents will never forget the

good work done by our own doctors in making early diagnosis and bringing a measure of relief. Hope drove out fear and much valuable assistance was given. For the first time in the history of the disease a well planned campaign was waged against it. The effort saved some lives, and without doubt many children who received the serum were saved from serious crippling. This good work was made possible by the co-operation of the Harvard Infantile Paralysis Commission and through Dr. Kramer in particular who worked unceasingly with our local physicians.

The JOURNAL feels that all will agree that any opportunity to express our gratitude to the Commission and Dr. Kramer should not be lost.

We understand that Dr. Kramer is planning to devote an entire year to intensive study of certain problems connected with poliomyelitis. The work will be carried on in Brooklyn, New York, with all the facilities of the Long Island College Hospital at his disposal. Positive immunization of the monkey is already an accomplished fact. Dr. Kramer seeks to secure active or passive immunization of the human being.

In the presence of another epidemic in our midst what a blessing it would be to have a positive and safe immunizing agent at hand.

Dr. Kramer is giving his time and services, but funds are needed to carry on the work. This office will be glad to forward any contributions.

Polycystic Kidneys Occurring in Three Members of the Same Family

By E. R. BLAISDELL, M. D., F. A. C. P., Portland, Maine.

CASE REPORTS

Lewis F., age 35 years, was first seen in my office April 19, 1930.

Family History—Father died at 50 of Bright's disease and mother died suddenly at 54 of apoplexy. No sisters or brothers dead. Two sisters are said to be in good health.

Past History—Unimportant. Tonsils were removed four months ago hoping to help the present kidney conditions.

Present Illness—As far as patient knows, began three years ago, when he had hematuria, which lasted for two days. Since then, he has noticed every few weeks a reddish tinge to the urine but this would only last for a half day. For the past year he has had to arise three or four times during the night to urinate and the quantity of the night urine is much more than that of the day urine. During this time, there has been considerable headache, with dizziness and gradual decrease of vision.

Physical Examination—Shows a pale looking man with puffiness of the lower eye-

lids. There is marked spasm and several small hemorrhages in both retinæ. The hemoglobin is 50%. The chest is clear. There is forcible pulsation of the whole precordia, with maximum intensity in the region of the left nipple, denoting considerable enlargement of the left ventricle. Cardiac dullness extends well to the left of the left nipple line and below the sixth interspace. The heart rate is 80 and regular and there is an apical systolic murmur of moderate intensity. The blood pressure is 180/110. The abdomen has a fluid wave and in each flank there is felt a hard mass which extends from the kidney region downward two-thirds of the distance to the anterior superior spine of the ileum. The liver is not felt. Slight pitting edema of both ankles is present. The urine contains 100 mg. of albumin with many red blood cells and both hyaline and granular casts. The specific gravity of the urine, after the Volhard water test, shows a fixation at 1010. The blood sugar is 95 mg., the blood urea nitrogen 83 mg. and the Wasserman is negative. Reflexes are normal.

The diagnosis of polycystic kidneys was made and the patient was advised to enter the hospital, hoping that rest, diet and iron medication would improve his condition. During two weeks of hospitalization, considerable relief from headaches and dizziness was experienced and the blood pressure fell to 150/100 but there was no change in the blood urea nitrogen.

Course of the Disease—The patient remained inactive at home after his hospital confinement. The headaches and dizziness did not return but the blood urea nitrogen remained constantly high and one week before death rose to 200 mg. Suddenly, without warning, on June 26, severe pulmonary edema appeared but morphine and large doses of digitalis quickly controlled this and a maintenance dose of digitalis kept him constantly free of rales. There was little change in the condition until the early part of October, when drowsiness and nausea were so troublesome that constant bed confinement was necessary. A typical uremic death occurred on Nov. 8, 1930. Autopsy was not obtainable.

Mrs. Ellen F., age 48, sister of Lewis F., was seen in the office Nov. 18, 1930.

Past History—Unimportant.

Present Illness—Since April of this year, she has had a backache and felt tired. For the past four months, it has been necessary for her to arise twice during the night to urinate but the night urine has not been larger in amount than the day urine. There has been no macroscopic blood in the urine.

Physical Examination—Shows a sallow complected middle aged woman of normal weight. Both retinæ appear normal except for slight arterial spasms. The hemoglobin is 85%. The blood pressure is 200/100. The heart shows nothing remarkable. The abdomen is flat and soft. In each flank and apparently connected with each kidney can be felt a hard, irregular mass, which extends about 4 inches below the costal margin. The specific gravity of the urine, after the water test, varies from 1004 to 1010, showing a disturbance of function with loss of concentrating power. There is 40 mg. of albumin, a few hyaline casts but no red cells in the urine. The blood urea nitrogen is 30 mg., the blood

sugar normal and the Wasserman negative. The remainder of the examination is essentially negative. A diagnosis of polycystic kidneys was made.

Progress of the disease—The patient has been seen at intervals of about three months since the first examination. Diet, proper rest and palliative medication have sufficed to reduce the blood nitrogen to normal, the blood pressure to 150/90 and to relieve the patient of her symptoms. Of course, there has been no reduction in the size of the kidneys and no restoration of the water function.

Amelia F., age 35 and sister of Lewis F. and Ellen F., was seen in the office Jan. 25, 1931.

Past History—Unimportant.

Present Illness—None. Came in for examination, on the advice of her sister.

Physical Examination—She is a healthy looking woman of normal weight. The hemoglobin is 90%, the blood pressure 130/70, the urine is negative with the specific gravity varying normally, after the water test, from 1004 to 1022. The blood chemistry is normal, the urea nitrogen being 13 mg. The lower border of the left kidney can just be felt. In the region of the right kidney an irregular mass, apparently connected with the kidney, can be made out. It extends downward about 2½ inches below the level of the costal border. The remainder of the examination is negative.

She was advised to live moderately, to have her blood pressure taken three or four times a year and to report if anything abnormal developed.

With the history of polycystic kidney in two other members of the family, the same diagnosis seemed justifiable in this patient.

Comment—Polycystic kidney is probably due to defective development in uterine life. It is more likely to give rise to symptoms in infancy or wait until middle adult life. If kidney enlargement, due to this cause, occurs in infancy it is early fatal. If the disease occurs in adult life, it usually assumes the course of a chronic nephritis and the patient may live many years. If the patient escapes a cerebral accident or cardiac failure, he will finally die of chronic kidney insufficiency. One kidney usually becomes enlarged months

or years before the other. The disease is usually familial.

In the cases just described, there seems to be no doubt that it was familial, as it occurred in all three offspring of a father and mother who died in middle age of vascular disease, possibly also from congenital cystic kidneys.

Polycystic kidney disease is not a surgical condition, except in rare instances when prolonged hematuria may require surgical interference. There is no specific medical treatment and the disease is undoubtedly a progressive one but the writer is inclined to believe that medical treatment directed toward the sparing of all unnecessary kidney irritation, if commenced before the specific gravity

of the urine has become fixed and before frequent kidney hemorrhages have taken place, may add months or perhaps a few years to life.

In the patient first described, kidney degeneration had advanced to such a degree that treatment was practically ineffective, while in the second patient, medical treatment has reduced the blood pressure to a satisfactory level, the urea nitrogen to normal and made her comfortable. Of course, this can not last indefinitely but it will probably add considerable time to her life. The third patient has not reached the symptom stage but occasional check-ups and advice should be worth while.

Case Records of the Central Maine General Hospital

Edited by JULIUS GOTTLIEB, M. D.; assisted by MAURICE DIONNE, M. D.

CASE V

THE USE OF ANTIVENIM IN PURPURA HEMORRHAGICA

PRESENTATION OF CASE

DR. ALTON GRANT: This is the case of an American boy eight years old who entered the hospital February 12, 1932, complaining of severe epistaxis, ease of fatigue and dyspnea. Last September marked the first time any trouble was noticed, when the boy called his mother's attention to the frequent appearance of black and blue spots, usually after slight trauma. Soon afterward and on three occasions in January, he had severe nose bleeds, with no scratches nor other apparent cause for the bleeding. On two days preceding entry, there had been intermittent epistaxis which became so severe on day of entry that a physician was called, who packed the nose and advised immediate admission to the hospital.

The Family History was irrelevant.

The Past History—He had measles and pertussis in the past; mumps one year ago. Otherwise the past history was negative.

Physical Examination—The patient was a well developed and nourished young male of 8 years, quite pale and the skin was fairly

dark, as is that of the rest of the family. There were two purpuric spots noted, one over each knee, about 4 cm. in diameter and there were no signs of petechiae over trunk nor extremities. The Rumpel-Leede test negative. Both nostrils were filled with tight cotton packs and blood. When these were removed, several areas of ulceration on both sides of the septum were seen, from which blood oozed continuously. The extremities were cold and the pulse rate 140 per minute. The liver and spleen were not palpable and there were no other physical findings of note.

Laboratory Data—On admission the blood cell count was 2,500,000 per cu. mm.; the hemoglobin was 40% (Talqvist); and the white blood cell count was 12,700 per cu. mm. The white blood cell differential count was: neutrophils 82 per cent; lymphocytes 14 per cent; monocytes 4 per cent. Fixed blood smears stained with Wright's stain revealed an almost complete absence of blood platelets, only three distorted forms being seen over an entire smear. The pricked ear lobule bled freely for twenty-four hours. The

coagulation time was four minutes (Howell method). The blood clot did not retract and was very friable.

Further Laboratory Data and Clinical Course — On admission the patient's condition was such that an intravenous administration of 500 cc. of 10% was deemed imperative as well as caffeine by rectum. 50 cc. of whole blood was injected intramuscularly. The following morning a direct transfusion of 500 cc. of blood was done. This failed to stop the epistaxis so that tight anterior and posterior tamponages were constantly required, as shown in Table I. A slight increase in platelets occurred the next three days.

In an attempt to induce hæmostasis, 10 cc. of "Hæmostatic Serum (Lapenta)" were given as well as several doses of calcium gluconate, all without apparent effect. Due to the anemia, Lilly's liver extract No. 55 with iron was administered and the red blood count rose to 4.5 millions in the course of three weeks.

About four weeks after admission, he had a pyrexia of 103.4 F. rectally and a fine diffuse macular rash appeared, which persisted two days and left behind a crop of petechial spots all over the body, simulating a measles rash.

Six weeks after admission, the patient suddenly had an hæmatemesis of about four ounces, several petechiæ appeared over body and the pulse rose to 120 per minute. The patient felt weak, was nauseated and seemed to be in a state of mild shock. The following day, he still was nauseated and vomited small amounts of blood at irregular intervals. A direct transfusion of 300 cc. was immediately performed, followed by a splenectomy. There was no further vomiting of blood and the post-operative course was normal. There was no bleeding at the site of wound. The platelet count rose distinctly for the following 10 days, a value of 150,000 per cu. mm. being reached on the seventh day. The nasal packs had been removed and there was no epistaxis for almost three weeks.

Nine weeks after entry, the platelets were again almost absent and a severe hemorrhage from the septum again occurred, requiring tight tamponage. A week later 10 cc. of anti-

venim serum (bothropic), supplied by the Mulford Company, was administered. Ten days later, the packs could be removed and the platelets in moderate number suddenly appeared in the blood stream. The boy was discharged.

Since discharge there has been slight epistaxis on three occasions, lasting about one minute. An examination of stained smears shows numerous normal platelets and the platelet count was normal when last taken, five months after hospital admission. The bleeding time is also within normal.

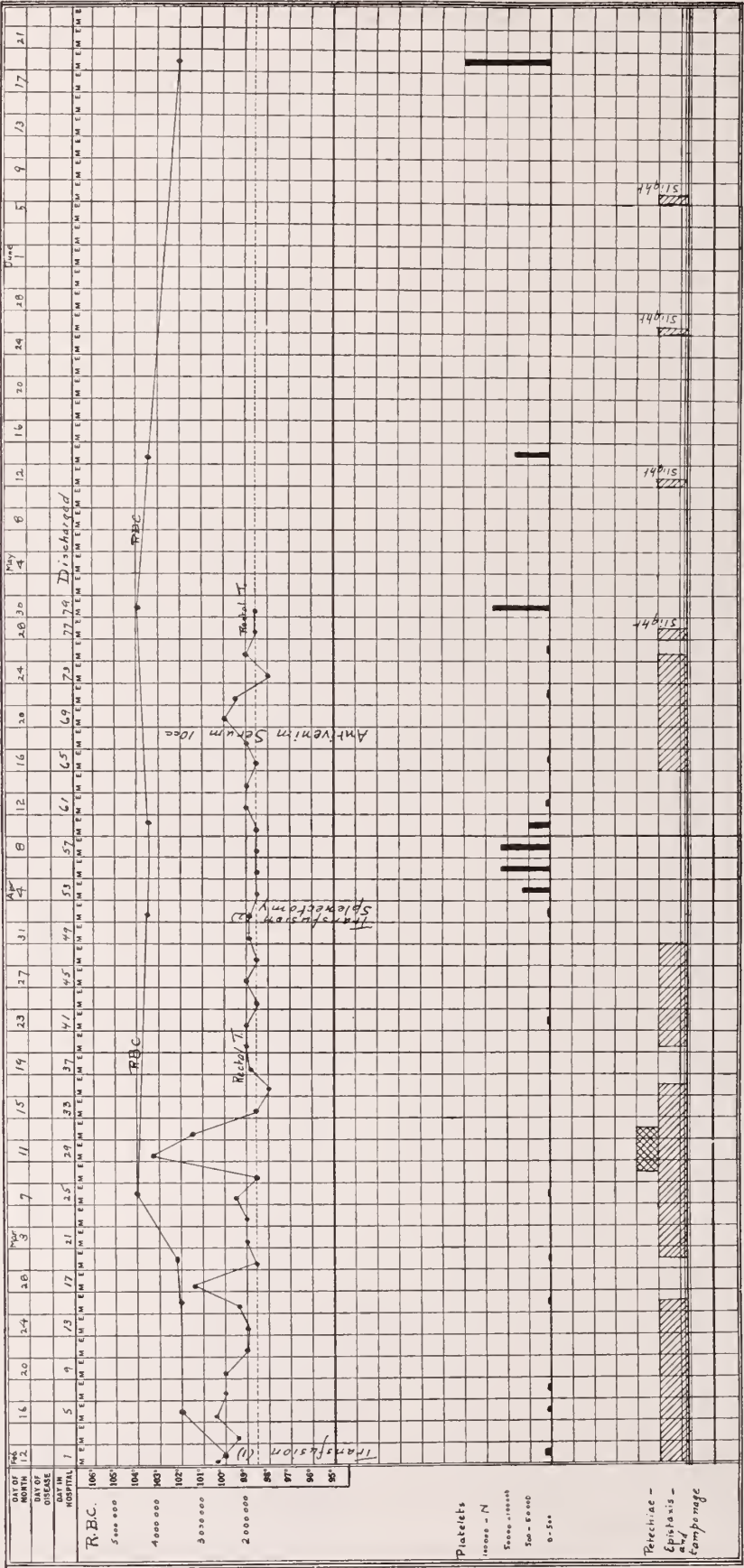
Diagnosis (from hospital records): PURPURA HÆMORRHAGICA, Idiopathic.

CLINICAL DISCUSSION

DR. J. GOTTLIEB:— We have seen two cases of purpura hemorrhagica in this hospital during the past half year. The first was an incipient acute progressive case; the second seemingly an acute exacerbation of a chronic purpura. This last case is the one we are now presenting. Knowing full well that the disease is one of remissions we treated this boy expectantly at first. Small transfusions were given as well as a full high-vitamin diet with added iron. The hemorrhages did not stop and when the patient suddenly showed symptoms of more extensive bleeding, splenectomy was done at once. This course is in accordance with the advice of many able surgeons and clinicians (1). Except for a transient improvement, little or no evidence of a change in the clinical picture could be seen. Favorable reports have been made lately, following the use of antivenim serum in this condition. The results in two cases were spectacular (2).

DR. R. N. RANDALL:— Snake venom in the treatment of hemorrhagic diatheses has for many years been used by the Homeopathic schools. Lachesis or the venom from the Lance Headed Viper (3) is the drug employed. I think it is of interest to mention this old-time remedy in view of the most recent suggestions in the treatment of purpura.

DR. J. GOTTLIEB:—In this case we administered ten cubic centimeters of bothropic anti-venom serum (Mulford) subcutaneously and a few days later (see chart) a distinct improvement was noted, which has persisted to



date—five months later. Dr. Randall's reference to the use of snake venom is particularly timely in view of the recent work of Peck (4) of the Mount Sinai Hospital of New York with snake venom in the treatment of hemorrhagic diatheses. Peck employed the moccasin snake venom with a dosage of .2 cc. of a 1:3000 solution in physiological saline given intradermally and in most cases increased to two injections of .2 cc. at different sites. The injections were given once or twice weekly and the duration of treatment varied with the cases. The best results were reported in cases of functional uterine bleeding.

DR. M. DIONNE:—Recently it has been said that the capillary permeability is increased in purpura hemorrhagica and that this change is the essential feature of the disease (5). A platelet reduction may or may not accompany this state. We feel that there is lack of evidence for this theory and that platelet reduction due to a failure in regeneration, to an increased destruction, or both, is at the basis of this condition (6). The changes in platelet morphology which accompanies their reduction is further evidence of this theory. Some authors draw attention to the fact that there is a similarity between these considerations in purpura and those which formerly took place in cases of pernicious anemia, before the advent of liver therapy. In the face of severe symptoms, splenectomy is considered imperative by many. Its use generally leads to a definite improvement, but its beneficial effects were not noticeable in this case for any length of time. The use of antivenim is very recent. Its action is based on analogy and probably must be considered essentially empirical. We feel that this case responded in such a way that it can be classified as a successful application of bothropic antivenim serum. What effect the splenectomy had on the serum action cannot be determined.

DR. R. BROOKS:—Do not all surgical procedures of any magnitude result in an increase in platelet counts and hence a tendency to arrest bleeding?

DR. J. GOTTLIEB:—Dawbarn, Earlam and Evans (6) found that the platelets do increase in number following other operations

in man as well as in splenectomy, but Bachman and Hultgren (7) claim that the thrombocytosis is of longer duration with splenectomy. Trauma to the spleen in the form of massage or manipulation is claimed by Steiner and Gunn (8) to be effective in raising the platelet count.

DR. EDSON BAKER:—During the splenectomy there must have been opportunity for such a rise. I kept in mind the theory expounded and therefore massaged the spleen prior to its removal and am quite interested to know what your periodic determinations were. There was very little bleeding during the splenectomy.

DR. J. GOTTLIEB:—The smears showed no particular increase in platelets taken at five-minute intervals during and following the operation over a period of two hours. It seemed to me that the bleeding time was shortened and that surprisingly little bleeding occurred. I dare not draw any conclusions as to whether good surgical technique was responsible or the purposeful manipulation of the spleen, or a combination of both factors.

DR. M. HARKINS:—What laboratory methods are of use in the differential diagnosis of purpura and hemophilia? Did you ever get any proven results from Hemostatic serum?

DR. J. GOTTLIEB:—In hemophilia, puncture of the skin rarely causes hemorrhages, the bleeding time is normal. The coagulation time is usually prolonged in hemophilia though it may be normal. Once formed, the blood clot retracts well. In purpura hemorrhagic, the punctured skin bleeds a long time, and the clot has but little retractile power. The coagulation time is normal. The platelets are much reduced in purpura, at times totally absent. In hemophilia the platelet count is normal, but their physiological function is disturbed. The value of hemostatic serum in my limited experience is quite dubious. Personally, I have very little faith in its efficacy.

DR. A. SPRINGER:—I notice that in the case of "bleeders," the opposite of what is expected occurs: the bleeding time is normal and not increased.

DR. M. DIONNE:—The business of count-

ing platelets is a difficult one. Very often an examination of a well-stained smear is just as good. Platelet counts should be done frequently by a technician in order that his results be considered accurate.

DR. J. HIEBERT:—The so-called "mesloid rash" sounds like an escape from a diagnosis. What was its nature and its probable etiology?

DR. E. C. HIGGINS:—Prior to the rash which resembled measles, the patient was receiving splenic pulp and pulverized blood fibrin with the hope of affecting a hemostatic effect. The rash and its attendant fever may be ascribed to an anaphylactic response.

DR. R. BROOKS:—Purpura hemorrhagica is said to be benefited by splenectomy: what has experience taught in this vicinity?

DR. J. GOTTLIEB:—Dr. Mortimer Warren of Portland was here at the time and said he knew of three cases which were directly benefited by the procedure. Dr. Castle of Boston advised the removal of the spleen in this case, while Dr. Weiss struck a more conservative note and advised removal in case the organ was enlarged.

DR. M. HARKINS:—I notice on this chart that the anemia rapidly improved. Is that attributed to the transfusion?

DR. E. BAKER:—Transfusion can have such an effect although in some measure the results can be attributed to the use of Liver Extract No. 55 with iron (Lilly). This extract has been used here in a number of cases of secondary anemia with a rapid rise in the number of red blood corpuscles.

DR. J. GOTTLIEB:—What apparently cured this boy is obscure. But we do know that neither the original transfusion nor the transfusion followed by splenectomy had any apparent curative values and that the patient was progressively growing worse. After the use of antivenim serum he improved and is now apparently well. Of course one must be on guard against the fallacy of reasoning by "Post hoc; ergo propter hoc." With the previous case reported and the recorded results with venim, it would be difficult to deny its possibilities.

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Social Insurance

By DR. EDWARD H. OCHSNER

Quality of Medical Services Deteriorate Under Compulsory Health Insurance—Continued

Some fifteen years ago when the prices of eggs and chicken feed were at their highest, I wrote my farmer and asked him why he was not sending us any eggs. I received the following laconic answer: "The pullets look good, but lay no eggs." Superficially examined, Compulsory Health Insurance "looks good" but unlike my pullets it has

laid many eggs, most of which are addled.

When we substitute governmental control in medicine and dentistry for independent, individual action, we stifle self-expression, individuality, initiative, courage, confidence, enthusiasm and industry. We, as a nation, are on the whole, already over-standardized. The very ones who wail the loudest about

the evils of mechanization are often the very ones who clamor the most for more government control. Excessive bureaucratic and lay control have much the same spiritual effect upon the professional man as over-mechanization has upon the intelligent craftsman. They both have a tendency to crush out fortitude, ingenuity, and pride of achievement in those engaged in these vocations. With some, standardization has become almost a fetish in spite of the fact that when pushed too far it always results in mediocrity. The efficient successful practice of medicine always has been and always will be a personal, unstandardized affair.

That the quality of medical services has deteriorated in those countries which have Compulsory Health Insurance is due to many causes, among which may be mentioned the excessive number of calls upon the time and energy of the physician. Those who receive free medical services are constantly running to the physician for every trifling ailment or compelling the physician to make many unnecessary calls at the homes. Every *Kranken-kasse* physician who has been interviewed has stressed this fact. *Bæumer* states in his book that between sixty-five and seventy per cent. of all calls are unnecessary, consume the time and energy of the physician and the resources of the *Kranken-kasse*, and prevent adequate medical services and hospital care to the really sick. *Liek*, in his book says the number of trivial conditions such as "microscopic skin abrasions, etc.," disgusted him so much that he retired from the service. This abuse has grown to such proportions in Germany that the government department has been compelled to issue new regulations to the effect that the insured have to pay a certain fee out of their own pockets for each prescription. This again has given rise to new abuses. A common sequence of new regulations to correct one abuse is to create an opportunity for newer ones. In England, unnecessary night calls became so common that many panel physicians disconnected their phones between ten o'clock, P. M. and seven o'clock, A. M. A

fine state of affairs if a patient has a strangulated hernia or an attack of gall stones, or acute appendicitis at midnight. We have all repeatedly seen and heard the statement that the workers of this country do not have medical services when they most need them—namely, at the beginning of an illness. The claim is made that were prompt services available at this time much serious illness could be avoided. Conclusive proof that private practice is more prompt than Compulsory Health Insurance practice is evidenced by the practice in England of avoiding night calls, and by the fact the percentage of pus appendix cases, which necessitate draining, is much greater in Germany than in the United States. We all know how the mortality rate is increased by letting acute appendix cases progress to suppuration before they are operated and how much longer the period of hospitalization is in suppurative cases. If acute illnesses had more prompt and more efficient treatment in Germany, for instance, than in the United States, suppurative appendix cases should be much less frequent, the mortality rate should be lower and the morbidity shortened. As a matter of fact, the reverse is the case, which proves rather conclusively that medical services in the United States are more efficient than those in Germany. Such abuses result in endless rules and regulations. Rules that accomplish little except to cramp the individuality and personality of the conscientious physician, wear him out with paper work and leave little time and energy for professional study and advancement. One official described his plight in the following words:

"I've settled into official routine; I'm fixed there hard and fast. It's so with many of us. Most of us recognize the hopelessness of ever pulling out. As I sometimes confess, I am merely one of the unburied dead."

That Compulsory Health Insurance does not, in fact, prevent sickness nor reduce economic loss as the result of sickness is also proven by the following facts: Before the

world war the average loss of time for sickness of the American laboring man was six and two-tenths (6.2) days per year; the German's, nine and two-tenths (9.2) days; the Austrians, nine and five-tenths (9.5). We are credibly informed that since 1923 the loss of time in Germany has increased another eighty per cent. above the nine and two-tenths (9.2) so that it now stands at approximately sixteen and five-tenths (16.5) as against (6.2) in America. A fine showing for Compulsory Health Insurance after forty-eight years of operation.

Let us see what some of the German and English think about the scheme. A high salaried German health insurance official said the following in 1927: "Health insurance is the oldest branch of German Social Insurance. The sickness insurance law of June 15, 1883, was the corner-stone of the proud building for which we were envied by foreign nations before the war. Unemployment insurance will, I hope in the near future, be the capstone of the building." To which Edwin Liek, a practicing physician of Danzig makes the following retort: "This is an expression familiar to physicians, words that we have frequently heard during the past four decades. Only now they affect us differently. In the beginning the doctors believed these dulcet tones: to-day only *parasitic physicians* or *pure fools* join in this festive song." And again he says, "Social insurance is today organized to fill the feed trough of *bureaucratic drones*." At a recent meeting of the Trade Union Council in Nottingham, England, a resolution was passed unanimously demanding that the government overhaul the Department of National Health.

That the average American citizen is getting better medical services than are the citizens of those countries which have had Compulsory Health Insurance the longest is borne out by the cited statistics, the quoted opinions as well as by a rather extensive personal experience both in this country and in Central Europe.

Social Insurance Undermines National Character

Parasitism is to-day the corroding canker of modern civilization, and anything which favors its growth and dissemination should be unequivocally condemned and most vigorously opposed.

The proponents of Compulsory Health Insurance or National Insurance, as it is called in England, reiterate again and again that these and the dole are totally different. In name and administration, yes, in effect, no. They both encourage people to want something for nothing, or much for little, which in effect makes parasites out of them. Almost endless illustrations supporting the statement that Compulsory Health Insurance and the dole are alike in effect could be produced, but one will have to suffice. Liek, in his book recounts the following experience he had while a Krankenkasse physician in Germany. A middle-aged man came to him for an examination with the view of securing sick benefit. Liek examined the patient carefully, could find nothing the matter with him, in fact, found him an unusually well-developed and robust individual. He told the man the facts and elicited the following story. The man told Dr. Liek that he was the only man in his village that did not get some kind of a government stipend, sick benefit, dole, or pension, and that everybody was ridiculing him because of this.

No one who is at all familiar with Bernard W. Shaw's writings will ever accuse him of being in favor of the present economic system in England. He has the following to say about the dole: "The Labor Party has just twisted conditions all around. They taxed people who live on unearned income, and create their own leisured class—people who live on the dole. The dole is not much, but if you have four or five in one family living on dole you have a hostel of leisured people living very well. That must cease."

The whole Social Insurance scheme is based on the ethically indefensible theory

that individuals are entitled to things that they have not earned, and on the politically unsound doctrine that society owes every citizen a comfortable living whether or not he repays society by doing his fair share of the world's work. Under Compulsory Health Insurance the individual who works only half-time is entitled to just as much free medical service and is likely to get much more in sickness benefits than he who works full time. Not only this, it actually encourages immorality and riotous living as the following personal experience well illustrates. As a young man I worked two seasons in a lumber camp. The camp in which I lived comprised between thirty-two and forty men. Of this number only one did not use intoxicating liquor; only two did not use tobacco, and half of the men spent their hard-earned wages either at the saloons in the nearby town, or went regularly to the island, or did both. Those who are familiar with the islands of the upper Mississippi River need no explanation as to why they went there. I wonder how Health Insurance, insuring these men for loss of time and providing free medical care for them, would have prevented their doing the very things which were the cause of much of their sickness. For my part, I believe that a larger percent of them would have gone to the island if they had felt that they would be protected against loss of time and that they would receive free medical care if they became sick. Health Insurance would actually have increased not only sickness, but immorality as well, in this camp.

A recent survey of five thousand students at the University of Minnesota found only ten, or two per thousand with positive Wassermans. Careful surveys in various parts of the country indicate that about three per cent. or thirty per thousand of the general population of the United States is syphilitic. A Wasserman examination of three thousand prisoners in the Southern Illinois Penitentiary revealed the fact that three in ten or three hundred per thousand were syphilitic. This same ratio undoubt-

edly pertains to the class most criminals come from and raises the average in the general population.

It is a well-known fact that alcoholics and those suffering from venereal diseases are much more liable to loss of time from sickness than are those not so affected. What right has any just government to take of the earnings of the two first groups without their consent and give them to the third group? A just and humane government protects the weak from oppression and exploitation by the strong and unscrupulous, but a just and wise government does not penalize the strong, industrious, clean-living and thrifty, and favor the weak, lazy, shiftless and immoral. Giving the weak, lazy, and shiftless undue advantage over the strong, industrious, and thrifty actually penalizes and handicaps the latter, interferes with the law "of the survival of the fittest," and must eventually lead to race degeneracy. If the white race persists in this course long enough, the "yellow peril," so often glibly and jokingly mentioned, may become a real menace to western civilization.

All independent writers on the subject state, and even the proponents of Compulsory Health Insurance have to admit that it has tremendously increased occupational neuroses, and that is just what was to be expected, and was expected by those who know human nature and can see just a little further than the ends of their noses.

The following quotation from a paper by Willian H. Hicks is pertinent: "In accident cases, where the question of compensation is involved, conditioned reflexes are sometimes created by the patients' environment that not only retard recovery, but instigate additional symptoms, or may lay the foundation for successful malingering."

One of the worst features of Compulsory Health Insurance is that if continued long enough it will crush out of character the three capital I's—Independence, Industry and Integrity. Such schemes are as Guglielmo Ferrero, the eminent Italian historian rightly

says, "artificial," and "While they tide over trifling evils of the moment, they lay up for the future troubles and difficulties and dangers of infinitely greater gravity."

Someone has said, "Happy is the nation that has no history." Whoever said this probably had in mind the old type school history text-book, which contained little besides records of military campaigns, revolutions and international wars. Viewed from that standpoint the epigram was unquestionably true. To-day a more suitable epigram would be, "Happy is the nation that has no need for charitable organizations or devices." The ideal society would be one in which every individual can and does secure a decent living for himself and those dependent upon him by the "sweat of his brow," or by mental exertion, or, what would be better still, by the application of both brain and brawn.

There is no fundamental difference between outright charity and social insurance; both undermine character; both have a tendency to pauperize the citizen, for both rob the individual and his self-reliance, and his enthusiasm and his urge for industry; they both penalize the honest, frugal and industrious and favor the lazy shifters and immoral, because they inevitably favor the unfair and inequable distribution of the results of labor; both encourage malingering and favor neuroses; both often give something for nothing or much for little, which is the basis of parasitism, and both delay the ultimate goal when every man shall reap the fruits of his labors.

The man who once accepts charity, particularly if it is not a case of dire necessity, is not quite so fine a man as he was before. He has lost something that nothing can replace. War, pestilence, or general disaster may reduce anyone of us to want and penury, and then there is no disgrace in accepting aid from our fellowmen; but under ordinary circumstances no able-bodied individual with fair intelligence and health has any moral right to that which he has not honestly earned.

The proponents of Compulsory Health Insurance will undoubtedly say that it was with the view of saving men and women from the stigma of being paupers, and the evil effects of pauperism that this and other phases of social insurance were brought forward. Exactly, but what has actually happened they did not foresee. As is so generally the consequence when a law is enacted on an emotional basis instead of on sound reasoning and adequate experience, an element was introduced even worse than pauperism: besides, pauperism was not relieved nor even mitigated.

There are two distinct types of paupers. The mentally and morally subnormal, who are not in any way injured by the stigma of pauperism, and who still remain paupers because no Compulsory Health Insurance law so far devised includes or can include them. They are the "unemployables" whom industry cannot use. The second class are old people who in their youth have been lazy or extravagant, or who have lost their savings through poor investments. Those who have been lazy and extravagant are simply reaping their just reward and have no one to blame but themselves, and it is morally wrong for the government to tax the thrifty and industrious for their support except in almshouses. The way to deal with the problem of the investment sharks is to teach the pupils in our high schools something about investment and to hang the gold brick and non-security salesmen, or if this is too drastic, devise some other way of putting them out of business.

Compulsory Health Insurance has simply added parasitism to pauperism. The effect upon the insured and upon the public in general is almost as bad as it is on the medical profession. It encourages malingering and deception; it puts a premium on sloth and shiftlessness and a penalty on industry and integrity and thrift; it robs industry of its just reward; and it encourages parasitism.

One of the first effects observed after its introduction in Germany was the changed attitude of a large group of the insured.

Before the law went into effect, patients came to their physicians for the relief of real ailments; after it went into effect an ever-increasing number came with imaginary and stimulated ailments for the purpose of getting the sick benefit stipend or free hospital care. The latter was particularly the case in the fall of the year when many came complaining of things that were difficult to diagnose and hence difficult to exclude such as spinal concussion, neuritis, and vague abdominal pains. As time has passed this abuse has gradually grown to appalling proportions as the following statistics indicate. Dr. Potts, of Oak Park, cites the following:

In a check-up in Brawnschweig, two thousand eight (2,008) people on the sick list were asked to report for a check-up examination. This induced eight hundred sixteen

(816) to report for work at once, two hundred eighty-nine (289) were found fit for work and only nine hundred three (903) or less than forty-five (45) per cent. of those receiving sick money were actually sick. The proponents of Compulsory Health Insurance will undoubtedly say, this is an individual instance. But not so. This abuse is so almost universal that it is seriously affecting the general honesty of the rank and file of the citizens of those countries where it has been in operation the longest. Social insurance is one of the major factors which has brought Germany to the very verge of economic ruin, and worse than even that, it is undermining the fundamental honesty and moral integrity of the German citizen.

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Report of Financial Section

JULY 1, 1931, TO JULY 1, 1932

To the Officers, Directors, Members and Friends of the Maine Public Health Association:

It gives me sincere pleasure to present my fifth annual report as Financial Secretary of your organization. With Prosperity hiding its illusive being just around the corner, and with Depression introducing itself on all occasions, we realize we owe an overwhelming debt of gratitude to the loyal citizens who have stood by us and our needs, so that our work could continue without interruption. *They* purchased the Christmas seals or served on some committee; *they* worked for and voted for a town appropriation; *they* helped with some special drive; *they* took out a membership or gave us a contribution; *they* gave of their time and attention, or of their profes-

sional ability and their interest. First of all, to this group of willing helpful friends who have made it possible for us to maintain our program and accomplish our tasks for Better Health for Maine, I extend thanks and sincere appreciation.

And now, regarding the Finances for the past year,—we began July 1, 1931, with a balance of \$9,315.33. We closed our books on June 30, 1932, with a balance of \$7,110.94, which is a decrease of \$2,204.39, so we start with a rather formidable handicap at the very beginning of the present year. Anticipating this sad start for our new fiscal year, the members of the Executive Cabinet and the office staff volunteered a cut in salary commencing June 1st, and which is now in effect. We were glad to be able to do this, for the work of the Maine Public Health Association is very dear to us all.

The total sale of Christmas seals and health bonds throughout the State showed a drop of \$6,718.40, the 1930 sale amounting to \$42,862.66, while the 1931 sale was \$36,144.26. This decrease is comparable with that in the entire Nation, and I was not ashamed to give Maine's rating at the National meeting last month. Hancock County again led the State in per capita sales, having succeeded in securing nearly ten cents per person, and our hats are off to the winning county, which has held that enviable position for several years. The M. P. H. A.'s proportional part of the 1931 seal sale was \$11,558.33, whereas last year it was \$14,444.69. That means that after supplies, postage bills and clerical helpers were paid, we had \$7,143.33 for the Early Diagnosis Campaign, the Clinic program, and to assist with the Child Health Education Section, instead of the \$10,524.42 of a year ago. However, Mrs. Anderson, Miss Buck, Mrs. Oakes, who kindly substituted on the Clinic program after Miss Davis resigned, Miss Moberg, the new clinic nurse, and I went into a huddle, and have been able so far to carry on the program. We are proud to say we have a small balance which we hope will be sufficient to continue the series of clinics until other financial assistance may be forthcoming. At this time may I express my appreciation to the Maine Medical Association for its

annual gift of \$400.00 for X-ray films? This is a great help. We have paid \$1,108.22 for X-rays during the past year, this sum being included in the Clinic Budget. Experiments are being made to manufacture paper films, and if this demonstration proves satisfactory, it will be a blessing to our program, financially, for they will cost much less than those used at present.

Our contributions for the year amounted to \$15,201.90, and to Dr. Bryant goes the honor and credit of securing the two large gifts,—\$10,000 from Mr. William Bingham, and \$2,000 from Mrs. Stodder. We are grateful to these two faithful and generous donors, and to our Vice-President, Dr. Bryant, for his kindness in annually presenting our projects and needs to these contributors. We also desire to mention especially Mrs. E. S. Woodman of Winthrop, who contributes \$500 each year, and whose gift,—the "Woodman Audiometer,"—has been in constant use during the school year.

Naturally our largest item in the budget is for the Nursing Services. Salaries, expenses, supervision and nursing supplies cost \$39,197.60 last year. As the appropriations raised by the voters of the various towns where M. P. H. A. nurses are located dropped about \$2,000 below 1931 figures, the nurses realized that their budgets would be exceedingly difficult to raise, and so many of them have very kindly volunteered a decided cut in salary. Their expense accounts, too, have grown appreciably less. It is needless to say that their willingness to cooperate is greatly appreciated by the Executives, and by their own local nursing committees. With the loss in seal sale, and town appropriations also, many communities would today be without nursing service had not the nurses themselves taken the initiative and loyally offered to work for less during the present economic situation. One service only has been terminated; that is the Somerset County, where the budget was entirely inadequate to warrant the continuation of the nursing program. All towns which raised town appropriations for such a service will be given work in proportion to the sum raised, but no permanent nurse will be maintained there this year.

July 1, 1932, showed our records with ac-

counts receivable amounting to \$5,447.01. This is money which we have advanced to the various services until such time as they can reimburse us. With the exception of Somerset County, and possibly Penobscot, funds will be available within two months, presumably to cancel these debts.

Special efforts were made to collect funds for our work during the summer months, 1931. Through the coöperation of the Executive Board, I was granted the privilege of employing three University of Maine students as Assistant Field Workers. Two of these were not successful, but the third one "made good" and is to be on the staff again this summer, in addition to two others who have been obtained through Mrs. Huddleston's recommendation.

The Three-Quarter Century Club met at Camden the 4th of August. This was indeed a gala occasion, and has gone down in history as a gemine "Red Letter Day." About 5,500 were present, among the speakers being Gov. Gardiner, Hon. Cyrus H. K. Curtis, Dr. Bertram E. Packard, Hon. Frank Holley, Congressman Carroll Beedy, Hon. Clarence Stetson, and other notables. No individual invitations were sent to the 14,000 odd members, and this resulted in a saving of at least \$200.00 to the M. P. H. A., as postage, printing and clerical help in past years had amounted to more than that sum. Sincere thanks are hereby extended to the friends who assisted in making August 4, 1931, such a happy occasion for so many of the "boys and girls" of 75 years or more.

This spring we introduced an innovation in finances by sending out to 500 people a card asking for a Penny A Day. This was done at the suggestion of Mr. Fred Clifford, one of our members. The results are still drifting into the office, more than \$50.00 over the cost having been received. The calendars read thus:

"A Penny A Day may mean little to you,
But much for Maine's health through the year
'32."

Last January I had the privilege of visiting at the office of the National Tuberculosis Association in New York for three days. The invitation was issued by the National to the Secretaries of the New England States. All expenses incurred were generously paid by

the National, and the three days were filled to the brim with helpful conferences which included all departments. In June I attended the annual meeting of the National Association at Colorado Springs, which cost the M. P. H. A. very little, as an equalization pool is arranged by the National covering part of railroad fare and pullman. The sessions were inspirational and instructive, and well worth attending. I was honored by being elected as one of five members of the National Seal Sale Advisory Committee, the first Maine delegate to be so honored.

In closing, I wish to again thank all who have made our work possible this year. Particularly should the Maine Central and Bangor and Aroostook Railroad Companies be recipients of our gratitude, for their kindness in granting free transportation to many of our staff. We also appreciate the generosity of the Maine Medical Association for printing our annual reports in their *Journal*, and of all the newspapers in the State for their coöperation. For the endorsement and approval of our plans by the Board of Directors and Executive Committee; for the coöperation given by the official health agency and by the Department of Education; for the unfailing kindness, patience and friendship of my co-workers, Mrs. Anderson, Miss Buck and Miss Roderick; for the fact that, although the budget is a bit depleted, the word "Discouraged" is not in our dictionary;—for these blessings, I wish to express heartfelt thanks.

Respectfully submitted,

ALICE H. MCGOULDRIK,
Financial Secretary.

AUGUSTA, MAINE, July 1, 1932.

Report of School Health Education Section—July 1, 1931, to July 1, 1932

Introduction

To the people who, in a large degree, are responsible for the success of the School Health Program, I dedicate my ninth annual report. They are:

Our Executive Committee, Mrs. McGoul-

drick, Mrs. Anderson and the office staff.

The State Department of Education, the Principals of the Normal Schools and the Superintendents of Schools who endorse the program.

The doctors and dentists who give their generous support.

The nurses, teachers and physical directors who are most coöperative.

Health Habit Activity

The Health Habit Charts for Classrooms, used for the second year, are proving very satisfactory. This activity is a participating affair, the work being done by the pupils under the supervision of the teacher. Approximately all of the school Unions in Maine used the charts last year. In June, 1932, 716 schools had qualified for an award—either the Trophy or the Seals. This is an increase of 19% over the number of schools qualifying in 1931 and an increase of 39% of the number qualifying in 1930.

During the fall, charts were sent to schools in Massachusetts, Vermont and New Hampshire. We made large orders of the charts for the states of Wyoming and Idaho. In the January, 1932, issue of *Hygeia*, which is published by the American Medical Association, a full page is devoted to our chart and nearly another page devoted to its use.

Six and Seven Point Child Activity

The Six and Seven Point Child Activity, which was originally the Six Point Child Activity, started in 1928, has increased each year in efficiency and popularity.

A Six Point child is not a physically perfect child. No one has yet determined just what constitutes a physically perfect child. A Six Point child is one who measures up to certain health standards determined by the physical inspection on Six Points, namely: vision, hearing, teeth, throat, weight and posture. If the Six Point child produces evidence that his birth has been recorded with the State Department of Health, this makes him a Seven Point child. The Department of Vital Statistics of the State Department of Health assures us that births are much more carefully recorded since 1929 when the Seventh Point was adopted. A permanent record of this information is made so that

births do not have to be looked up each year.

Since the pins and certificates bear the year in which they are awarded and since no child would be happy to have the same certificate and pin year after year, the color of the certificate and pin is changed each year.

During the five years that this activity has been a part of the School Health Program, the number of Six and Seven Point children has grown from 3,000 Six Point in 1928 to 23,000 Six and Seven Point in 1932 or an increase of 150% over the five-year period. Since the activity starts in January and closes the first of December, it is reasonable to expect that there will be at least 3,000 more children qualify for the award which will bring the number up to 26,000 in 1932. This year it was my privilege in a few instances to award certificates and pins to children who had qualified in 1929-30-31 and 32.

Better Teeth Campaign

The increase in the number of dental corrections shows that in spite of hard times, people are becoming more health conscious and realize the need of giving special attention, not only to their own children, but in financially assisting the needy children in the community.

Last year 58 rooms met the 100% requirements and 311 rooms the 50% requirements. Two schools, the Hacker School at Fort Fairfield, grades 1, 2, 3 and 4, with an enrollment of 163 pupils, were awarded not only the 100% dental certificates for each room, but a special award. The McDonald School in Rumford, grades sub-primary to 7 inclusive, with an enrollment of 75 pupils, also received three 100% dental certificates and a special award. These awards were the Maine Public Health Association shield with inscription, giving name of school, grades, enrollment, etc. This is an excellent record considering the fact that potatoes in Aroostook County were selling for from 30c to 50c a barrel and that the mills in Oxford County were employing few people and were running part time. The little school of 22 pupils in Buffalo, Aroostook County, 14 miles from the dentist, with 17 children having all the necessary dental corrections, the school in Windham, Cumberland County, in which the janitor work was given each week to a different child

and the \$1.25 used for needed dental corrections and the little girl who walked five miles through the mud to get her teeth filled, are equally good records. In each instance the teamwork of the teachers and children was responsible for what was accomplished.

100% rooms or schools, 1927-28,	8
" " " " 1928-29,	32
" " " " 1929-30,	50
" " " " 1930-31,	50
" " " " 1931-32,	58
50% rooms or schools, 1927-28,	35
" " " " 1928-29,	135
" " " " 1929-30,	240
" " " " 1930-31,	290
" " " " 1931-32,	311

Last October, I was invited to speak at the New Hampshire State Teachers' Association at Laconia. Mrs. Davey, the nurse in charge of the School Health Program at Keene, was very much interested in our Better Teeth Campaign. Through the coöperation of the local dentists, Parent-Teacher Associations and teachers, 26 rooms in the Keene School System met the 100% requirements and were awarded 26 Maine Public Health Association 100% Dental Certificates. Twelve 100% certificates have been sent for two years to schools in Malden, Massachusetts.

Contests

In July, 1931, the Health Essay Contest was substituted for the Health Playwriting Contest, the essay to be a story of some improvement or activity carried on in the school by the students. It was at that time decided to award three prizes in the Health Essay and Health Poster Contests if ten or more schools entered the contests. If less than ten schools entered only one prize in each contest was to be awarded.

The Teacher-Pupil Health Habit Activity Contest designed to improve the school house-keeping, to stimulate an interest in the Health Habit Activity and in correction of defects and to encourage the teacher to develop originality in the health program, was started in September, 1931.

Since less than ten schools entered the contests only one prize was awarded in each contest, which is as follows:

Health Essay Contest, Ralph Burnell, Junior High School, Bridgton, fountain pen.

Health Poster Contest, Ruth McPherson, Woodland School, Woodland, \$3.00.

Teacher-Pupil Health Habit Activity, Eleanor Bartlett, White School, Madison, "Healthyland."

Unit in Cleanliness Teaching

"Cleanliness Town" developed by grade one, Vaughan Street School, Portland. Miss D. Stella Clark, teacher, for which Cleanliness Institute gave a \$25 honorarium, will this fall appear in the "Grade Teacher," edited by Miss Florence Hale.

Other Activities

During the spring and summer, talks were given to the student teachers at all the Normal Schools and at the summer sessions, to groups of teachers in 40 of the Unions and to school children in all sections of the State, to Parent-Teacher Associations and Women's Clubs, etc. Health Education literature was exhibited and given out at the Normal Schools.

Program for 1932-33

The program for the coming year will consist of the Six and Seven Point Child Activity and the Better Teeth Campaign; the teaching of health habits through the use of the Health Habit Charts for Classrooms; the improvement in the school environment through the use of the questionnaire on School Housekeeping, and the contests.

Conclusion

It gives me pleasure to take this opportunity to thank the many friends who have worked early and late to promote the health program. I wish to make special mention of the newspapers that have been most generous with their space. During Child Health Week and from that time until the schools closed in June there was hardly a day that one of our daily papers did not print a story of some of our activities. Many pictures of the school children accompanied the articles.

Respectfully submitted,

ABBIE M. BUCK,
Director School Health Service.

Report of Public Health Nursing Section—July 1, 1931, to July 1, 1932

To the Friends, Board of Directors and Executive Committee of the Maine Public Health Association, I hereby submit my report as Nurse Supervisor and Secretary of various sections with which I am associated.

Space does not permit me to give statistics of the nursing program in this brief report. These may be found in our files at the Central Office.

The work of the nurses is closely correlated with the work of the various sections, whose reports follow. It is not too much to say, however, that the success of these sectional activities depends largely on the nurses. The Dental Clinics, the audiometer program, the tuberculosis clinics, and the infant and child hygiene work, are all carried in detail by the nurse in her general program.

Dr. Henry Vaughn, Health Commissioner of the City of Detroit, has recently said: "If an adequate Health Service is to be provided to a County or a Community, nearly 50% of its budget should be spent for its Public Health Nurses." He also said: "The Public Health Nurse occupies an unique position. She becomes the family counsellor and endears herself to the hearts of the mothers and the little children. The Health Officer or Inspector frequently appears as an arm of the law, but the nurse makes an ardent supporter of the mother for official health work, because the nurse teaches the mother about health, cares for her when she is sick, and helps her with her family health problems."

There have been a few changes in our staff the past year. Miss Bella C. Davis' resignation as Clinic Nurse became effective January 1st. Miss Davis has been on our staff since 1927 and has served the association in various fields. She "pioneered" as our first full-time clinic nurse. During the time she was with the Clinic, necessary changes were made in our Tuberculosis Program to include case finding in childhood type of tuberculosis, offering facilities for diagnosis through X-rays and the tuberculin skin test. Her place is being filled by Miss Lilly C. Moberg, who came on the staff in May of this year.

Mrs. Marian F. Oakes carried the Tuberculosis program in Augusta and assisted with the unfinished clinic program during July, August, and from January to May.

Because of our diminishing budget, it has been necessary to combine two counties, Penobscot and Somerset, under one nurse, giving service only to the towns which raise money for the work. This plan was started in November, and the Somerset County Nurse was transferred to the Southwest Harbor-Tremont Service.

In line with economy practice our usual nursing conferences have not been held this past year. To supplement this lack, a joint three-day Institute was arranged by the Red Cross and the Maine Public Health Association in September. Miss Sena Anderson conducted a teaching institute for Home Hygiene and Care of the Sick. Mrs. Violet Hodgson presented a very unusual picture of the nurse's part in a tuberculosis program. These courses were open to all nurses in the State; 28 nurses attended—16 M. P. H. A. nurses, eight American Red Cross and four independent services.

The opportunity afforded me by the Association of attending a two weeks' course at the National Tuberculosis Institute in January was much appreciated.

I have given the usual course of six lectures at the schools of nursing in Bangor and Portland to the senior students this past year. Students from eight schools attended these lectures.

Our Program and the Depression! How much have our activities been curtailed? I am pleased to report that while our budget has been lowered our program remains the same. Some of our staff nurses, showing their usual fine spirit of coöperation, offered voluntarily to accept a cut, so that the budget might cover the entire year's program for their territory. It was decided that a cut of 28% in salary and retrenchment in expenses would take care of the deficit in their budgets. The services in Penobscot, Piscataquis and North Franklin Counties would undoubtedly be maintained for only a part of the year, had our nurses not made this direct contribution. We appreciate this contribution from the staff and hope the cut may be temporary.

Our membership with the National Organization for Public Health Nursing has been continued this year. Our percentage rating of the nursing staff has been raised from 84.24 in 1931 to 94.12 in 1932. Our staff has a 100% membership in this National Organization, which indicates that they all meet requirements for professional fitness for Public Health work.

There have been the usual problems of administration, but they have been met and satisfactorily adjusted through visits and committee meetings. About half of my time is spent in the field working with the nursing staff.

A brief glance at our annual reports from various services coming in July 1st, shows that our staff nurses were carrying 32,774 individuals in our State for health supervision. These patients were distributed in 15 of our supervised services. Calls and demands for the nurses show a marked increase this year, many of them being for material relief or social welfare.

My final word is a plea for support of community health work. We need to economize, but we need to think whether or not we are planning our retrenchments wisely. Shall the first targets in the economy program be our health workers?

It is because these workers have kept so everlastingly at it that we have such a marked decrease in death and sickness rates. Shall we undo all they have accomplished? Shall the dollar be the standard of value or shall it be human lives, happiness and economic independence, all of which are interwoven and interdependent?

My heartiest appreciation for service rendered goes to that splendid group of men and women all over Maine, who serve on our committees without pay. Their sympathy and support make my problems a joy and every day I am grateful that I have the privilege of working with them.

Respectfully submitted,

THERESA R. ANDERSON, R. N.,
Director.

Report of Tuberculosis Section —July, 1931, to July, 1932

The only full-time worker is a registered nurse with Public Health Nursing Training. She has also had special instruction in the use of the X-ray machine, in the technique of taking X-ray pictures, and the giving and reading of the Von Pirquet test.

The clinic program is sponsored and directed by a committee of physicians who are specialists in diagnosing tuberculosis.

These physicians approve of all policies governing the set-up of the program and also make a substantial contribution in other ways. Drs. Brewer, Carter and Shaw have developed all the films the past year and have also served as diagnosticians at various clinics throughout the State. Dr. Ames of the Eastern Maine General Hospital in Bangor and Dr. Goodrich of the Augusta General Hospital in Augusta, Roentgenologists, have rendered service in interpretation of films since the beginning of this program. It has always been the purpose of this committee to make the clinic a place for consultation between the family physician and the clinician; and that all advice and final decisions regarding the prognosis of patients and details of future treatment should be given to the patient by his family physician.

Needless to say that in common with all other budgets we have a smaller sum this year with which to carry on. The sale of health seals at Christmas time finances this entire program and our sale dropped \$7,000 last year.

The increasing number of requests coming in every day for the clinic program indicates the widespread interest of the people of Maine in this grave problem. Some communities request this program every year; for instance, Bar Harbor, Belfast, Waterville, Augusta and others.

During the period July, 1931, to July, 1932, the following is a summary of the work of the Clinic Nurse:

Von Pirquet skin tests given,	3,472
Positive reactors to above tests,	636
*Patients X-rayed,	715
Chest examinations,	191
Active cases of pulmonary tuberculosis diagnosed,	173

The staff nurses of the Maine Public Health Association are carrying under health supervision 638 patients in the homes at the end of the year.

The Clinic Nurse, Miss Bella C. Davis, resigned and left the service January 1st. The Association owes Miss Davis a debt of gratitude for her devotion to her work and the skill and judgment with which she met the problems found only in pioneer work.

The new Clinic Nurse, Miss Lilly C. Moberg, came to the service on May 1st, Mrs. Marian F. Oakes, R. N., having kindly substituted during the interim.

Health Education

It is difficult to evaluate our accomplishments through the Health Educational Service. During the past year we have been sending Tuberculosis Abstracts to 18 physicians and 32 nurses monthly. We have circularized these physicians to see if they wished the abstracts to be continued. In order to increase our list for this coming year, we have written the various County Medical Societies, and our list now includes 70 physicians and 30 nurses.

Each month the *Journal of the Outdoor Life* is sent to a selected group of tuberculosis patients.

Twelve thousand pamphlets were distributed during the month of April in connection with the EARLY DIAGNOSIS CAMPAIGN. Literature and Health Talks were sent Dr. Wm. L. Holt of the State Department of Health at his request to be distributed to Health Officers in the State of Maine.

The special program conducted under the Early Diagnosis Campaign in April has also an important bearing in directing the minds of the people to tuberculosis. Coöperation has been given through radio talks by district health officers under the Department of

* The larger number of X-rays than Reactors is due to the fact that the physician did not require Von Pirquet skin tests before taking X-rays, also some are retakes.

Health; through sermons by clergymen; newspaper publicity; and the distribution of 500 pamphlets "Tuberculosis Doesn't 'Just Happen'" to every town and city of the State.

A valuable contribution to the prevention of tuberculosis is made by the Health Education Service under Miss Abbie M. Buck through use of the Health Habit Charts in teaching early formation of good habits of health practice.

Two meetings of the Tuberculosis Committee have been held during the year.

At the present time requests for clinics have been filed for Bar Harbor; a series of towns in Washington, Cumberland, Oxford, Penobscot and Hancock Counties; and two clinics a year for Sanford.

Belfast, Limerick, two Biddeford and Saco, Brownville, Milo, Skowhegan, Madison, two Augusta, Fryeburg, Waterville, Bangor, have had clinics during the past fiscal year.

CHARLES B. SYLVESTER, M. D.,
Chairman.

Report of Social Hygiene Section—July 1, 1931, to July 1, 1932

To the officers and friends of the Maine Public Health Association, I submit a report of the Social Hygiene Section.

The nurses of the Maine Public Health Association coöperated with the Social Hygiene Section by taking patients to the hospital for treatment, securing needed tests for diagnostic purposes, providing opportunities for programs on Social Hygiene for High Schools and Parent-Teacher Associations. This group of nurses and Miss Buck of the School Health Education Service arranged for some of the talks given by Dr. William Holt and Miss Herrick of the State Department of Health.

Talks were given to high school groups in the following 16 cities and towns: Auburn, Turner, Fairfield, Bridgton, Freeport, Gray, Windham, Pine Tree Academy (Lewiston), Gorham, Standish, Lubec, New Portland,

Kingfield, Dixfield, Bar Harbor and Phillips. Dr. Holt also addressed five Parent-Teacher Associations.

Respectfully submitted,

GEORGE H. COOMBS, M. D.,
Chairman.

Report of Dental Hygiene Section—July 1, 1931, to July 1, 1932

To the officers and friends of the Maine Public Health Association, I submit a report of the Dental Hygiene Section.

Early dental care is most important and children suffering from lack of this care come from all classes and communities. A few years ago 75% of the school children in our rural communities had never visited a dentist except for extractions. Statistics show that a large number of mentally-retarded children have serious dental defects.

Dental Clinics

The Dental Clinics in both the urban and rural communities have nearly doubled during the past two years. These clinics meet the need of children whose parents have more than they can do to supply food, shelter and clothing. Dental Clinics reported by the Maine Public Health Association Nursing Services number 97, with an attendance of 706 school children, 2,120 examinations, 11,892 dental defects and 4,208 corrections.

Dental Clinics are available to children in many of the cities and in many of the rural schools of Cumberland, Franklin, Hancock, Penobscot, Washington and York Counties. Arrangements are made with the local dentist for a small charge for each treatment. A few towns have made special appropriations for needy children. In Hancock County, one-third of the cost of the Dental Clinics is assumed by the local Red Cross Chapter and two-thirds by the County Chapter at Bar Harbor. The work in most towns is being done by the local dentist or by a dentist in a town nearby.

The Maine Dental Society is sponsoring a Dental Health Program for school children. Dentists in all sections of the State are most coöperative, giving rates to poor children, do-

ing much free work and in some towns visiting the schools and making free dental examinations. Practically all the dentists in the State give the child a signed certificate when all work has been completed.

Dental Corrections

The number of dental corrections in 1932 exceed those of 1931. This is most gratifying as lack of work and general existing conditions make it difficult for parents, whose children do not have access to the free dental clinics, to pay for dental corrections.

The city systems and the rural Unions reporting the largest number of rooms with 100% and 50% dental corrections are as follows:

Bangor, 18 rooms with 100% dental corrections as compared with 15 rooms in 1931.

Portland, 87 rooms with 50% dental corrections.

Fort Fairfield, 7 rooms with 100% dental corrections.

The Dexter Union, 17 rooms with 50% dental corrections.

The Dexter and Bluehill Unions vie with each other for first place. Bluehill with 6, 100%, and 11, 50% rooms; Dexter with 1, 100%, and 17, 50% rooms.

The Hacker School at Fort Fairfield, with four grades, and the McDonald School at Rumford, with eight grades, were each given special awards as all the 238 pupils in these two buildings had 100% dental corrections.

The number of rooms having 100% dental corrections has grown from 5 in 1927 to 58 in 1932. The number of rooms having 50% dental corrections from 35 in 1927 to 311 in 1932.

Respectfully submitted,

DR. GERALD P. CLIFFORD,
Chairman.

Report of Eye, Ear, Nose and Throat Section—July 1, 1931, to July 1, 1932

Eye Division

Through the coöperation of the staff nurses of the Maine Public Health Association, 21,404 children have received vision tests during the past year. These reports show

that 2,348 vision defects were found by means of the test, and that 587 children had their defects corrected. The committee advocates securing a correction of vision defects at an early age, thus eliminating the handicap produced through defective sight.

Nose and Throat Division

Again quoting from the reports of the staff nurses we find the number of children inspected for abnormal conditions of nose and throat to be 22,437. The number of defects found through this inspection was 3,535. These were referred to the family physicians in all cases. 636 children during the year received corrections for their throat and nose defects, and are now qualified on that particular health point.

Ear Division

As a result of suggestions emanating from the Maine White House Conference last fall, and following consultation with Dr. B. E. Packard, State Commissioner of Education, it was decided to conduct special tests in Kennebec County, in addition to the regular testing of hearing. It was felt that Kennebec County, containing both municipalities and rural communities, would furnish a good cross index for the whole State, and, being compact, would present less difficulties in making a more or less comprehensive survey. In Augusta and Gardiner the "Woodman" 4-A audiometer was used; in the other localities the whisper test was given. 10,905 children were examined; 354 were found to have defective hearing.

Arrangements were made for clinics to be conducted by Otologists on Saturday mornings, which would not interfere with school routine. At these clinics 186 were examined, or 52.5% of the total number found defective. In 23 there was no ear pathology or the cause was easily remedied, such as impacted cerumen. The diagnosis in the other cases varied. Treatment was advised as follows: Tonsil and adenoid operation, 105; X-ray of sinuses, 22; Dental, 18; General examination and treatment, 8; Local treatment ear, 16; Septum operation, 2; Luetic, 4 (probable).

After careful study of the records the prognosis was considered good in 162, poor in 24. It would seem that these last cases would

probably, sooner or later, need further help, such as instruction in speech reading. The result of this survey would seem to show the advisability of having pupils reported as defective in hearing examined in the schools by an Otologist, if it is ever possible to accomplish this. It is suggested that the same method be employed next year to check up on these findings and ascertain to what extent the advice given has been followed up.

We wish to express our appreciation for the coöperation of Dr. Packard, State Commissioner of Education, the various Superintendents of Schools, and school nurses, and of the doctors who assisted by working in the clinics.

In addition to this special demonstration, the public health nurses connected with the Maine Public Health Association have given the whisper hearing test to 21,334 children, finding 454 who showed defects in hearing: 36 of these have had the defect corrected during the year. The "Woodman" audiometer has been used in 31 cities and towns; 9,598 tests have been given with it and 1,639 re-tested. The number of children with a hearing loss of 9 or more is 451.

A comparison of "whisper" and "audiometer" tests was carried on in York County, with the following result:

<i>Whisper</i>	
Number tested,	2,358
Number found with a hearing loss in one or both ears,	46
Number found with a hearing loss in both ears,	23
<i>Audiometer</i>	
Number tested,	2,358
Number found with a hearing loss of 9 or more in one or both ears,	100
Number found with a hearing loss of 9 or more in both ears,	28
Number found with a hearing loss of 20 S. U.,	3
Number found with a hearing loss of 60 S. U.,	0

FRANK Y. GILBERT, M. D.,
FREDERICK T. HILL, M. D.,

Chairmen of Divisions.

Report of Mental Hygiene Section—July 1, 1931, to July 1, 1932

This spring 515 Mental Health Questionnaires were sent out from the Augusta office for the purpose of gaining information concerning the means used in stimulating the mental health of the children in the State of Maine. These questions covered such items as type of community meetings; attempts of mothers to develop the natural abilities of their children before entering school; libraries available to community residents; interest demonstrated by parents, school officials, etc., in mental hygiene; educational advantages, etc. Of the 515 questionnaires distributed, 260 replied. A report of the findings disclosed will be made later.

Last October our Section, through the co-operation of the State Department of Education, conducted a Mental Hygiene Program at the State Teachers' Convention in Portland. Dr. C. Macfie Campbell, Professor of Psychiatry in the Harvard Medical School, and director of the Boston Psychopathic Hospital, was the principal speaker. His subject was the "Personality of the Child and Adolescent. Its Importance for Teacher and Physician." As the point of view of Mental Hygiene largely coincides with that of the more progressive educational systems, the teachers who attended felt amply repaid.

CHARLES A. DICKINSON, *Chairman*.

Report of Child Hygiene Section—July 1, 1931, to July 1, 1932

Through the coöperation of the staff nurses of the Maine Public Health Association, the following conferences stressing the hygiene of the baby and preschool child were conducted during the last fiscal year:

Well Baby Conferences,	244
Attendance:	
Adults,	937
Mothers,	1,597
Babies, new,	789
Babies, old,	423
Preschool, new,	393
Preschool, old,	400

Local physicians have been in attendance at many of these helpful sessions and gave thorough physical inspection. Their advice as to diet and care has been much appreciated by the mothers in attendance. In some instances Miss Clye Ricker of the Maine Baby Saving Association has also been present, and assisted during the conferences.

CLAIR S. BAUMAN, *Chairman*.

Report of Orthopedic Section—July 1, 1931, to July 1, 1932

In March, Dr. Mortimer Warren of Portland was appointed by Governor Gardiner to make a survey of the State with the idea of checking up on all infantile paralysis cases, and others crippled from various causes. Dr. Warren conferred with the Maine Public Health Association which gladly coöperated by sending out a letter together with a questionnaire to 520 Maine towns and cities. Replies were received from 182 of these precincts. The following statistics secured from the 35% which answered may be of interest:

Number of cripples reported,	576
Infantile paralysis (marked),	290
" " (moderate),	84
" " (slight),	82
Other deformities,	120
Had treatment (yes),	324
" " (no),	32
" " (unreported),	220
Cured (yes),	38
" (no),	51
Improved,	232

Replies are still being received, so this report is not complete. Quoting a paragraph from Dr. Warren's letter: "Why do we want this information? To offer facilities for help to those who could not secure the same in any other way. Let it not be said of any child or adult that he or she is in need of treatment, and opportunity was not provided."

No definite work, other than this, has been carried on by the Orthopedic Section this year. The staff nurses report 61 children with orthopedic defects, many of whom are receiving the necessary treatment through the kindness of members of our committee for this Section.

Report of Cancer Section— July 1, 1931, to July 1, 1932

As the committee is awaiting the report of the findings of the special cancer survey conducted by the Maine Public Health Association, last year, at the request of the American Society for Control of Cancer, no definite program was carried on by this Section this year. As soon as the report is available, concrete plans will be formulated for combating the disease in Maine. Through the efforts of the staff nurses, literature pertaining to the prevention of cancer was distributed at club meetings, Farm Bureaus, etc. Several talks were given regarding this subject, the prevention of which is largely a matter of education, so that the victims themselves may recognize the early symptoms, and take steps to prevent its development.

Arrangements are being made for Dr. C. C. Little, of the Roscoe B. Jackson Memorial Laboratory in Bar Harbor, Executive Secretary of the American Society for the Control of Cancer, to be the principal speaker at the annual meeting of the Maine Public Health Association to be held in the near future.

Report of Heart Section— July 1, 1931, to July 1, 1932

Two Cardiac Clinics were held this year, one at Dexter with ten patients; the other at Belfast with twenty. These were conducted in connection with the Tuberculosis Clinics held in the two communities. Heart Specialists made the examinations and diagnosed the cases in both instances. More than 1,000 pieces of literature regarding cardiac problems and care have been distributed by the staff nurses.

NOTE:—The Officers, Directors and Executive Cabinet of the Maine Public Health Association sincerely appreciate the helpfulness exhibited by the group of busy physicians and other professional men who so kindly and generously serve as Section Chairmen and members of committees. They give unstintingly of their time and attention, and such service is gratefully received and appreciated.

County News and Notes Androscoggin

The Androscoggin County Medical Society held a meeting and clinic Friday, September 2nd, at the Central Maine General Hospital. In the afternoon, Medical Case Presentations and Discussions were led by Dr. Henry Jackson, Jr., Assistant Professor, (Harvard Medical School). A paper on "Angranulocytosis and Allied Conditions," by Dr. Jackson, was read in the evening.

J. GOTTLIEB, *Secretary.*

Franklin

The Franklin County Medical Society held its annual meeting at Lakewood, on August 25th, in connection with the Somerset and Piscataquis Societies.

Dr. Joseph Pratt, of Boston, gave an address on Heart Disease.

Dr. F. B. Colby, of Rangeley and Dr. C. C. Weymouth, of Farmington, were elected to membership, and Dr. John Gaffney, Resident Physician at the Franklin County Memorial Hospital was elected to honorary membership.

The following officers were elected for 1933:

President—A. E. Floyd, New Sharon.

Vice-President—T. E. Makepeace, Farmington.

Delegate to Maine Medical Association—John Moulton, Rangeley.

Alternate Delegate—B. L. Arms, Farmington.

Secretary-Treasurer—G. L. Pratt, Farmington.

Councilor for Three Years—T. E. Makepeace, Farmington.

Member Legislative Committee—G. L. Pratt, Farmington.

G. L. PRATT, *Secretary.*

Somerset

At a regular meeting of the Somerset County Medical Association held at Lakewood, August 25, 1932, the following officers were elected:

President—Dr. W. S. Stinchfield, Skowhegan.

Vice-President—Dr. O. J. Caza, Skowhegan.

Secretary and Treasurer—Dr. C. A. Moulton, Hartland.

Censors—Dr. H. W. Smith, Norridgewock; Dr. P. E. Gilbert, Madison; Dr. E. D. Humphreys, Jackman Station.

Delegate—Dr. E. L. Hutchins, North New Portland.

Alternate—Dr. C. A. Moulton, Hartland.

C. A. MOULTON, *Secretary.*

At a meeting of the Council held August 28th, Dr. Edwin W. Gehring, of Portland, was elected President of the Council, and Dr. Philip Webb Davis, Secretary-Treasurer of the Association, and Editor of the JOURNAL for the ensuing year.

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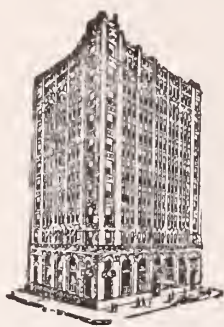
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News

Dr. Carl J. Hedin, Superintendent of the Bangor State Hospital, advocated handling criminals by the state in the same manner as it is now handling the mentally ill. In an address delivered before the Bangor Rotary Club at its regular weekly luncheon at the Bangor House, Dr. Hedin took for the subject of his luncheon talk, "A Medical Viewpoint of Crime and Responsibility." During his talk the speaker contrasted the medical and legal definitions of crime, saying that crime from a legal standpoint is any act which is detrimental to society, and from a medical standpoint is any irrational act performed without a comprehensive understanding of the individual.—*Bangor Daily News*.

Oral Therapy in Congenital Syphilis

The use of Stovarsol in congenital syphilis by pediatricians abroad induced Maxwell and Glaser to investigate the value of the therapy. The results achieved in ten cases are reported in full in the *Am. J. Dis. Child*, 43:1461-1489, June, 1932.

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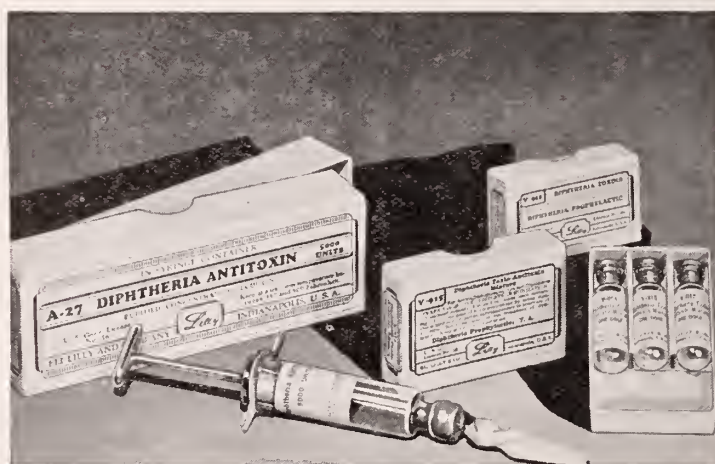
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Maine Medical Journal

The Official Organ of
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Vol. XXIII

Portland, Maine, October, 1932

No. 10

Editorial

County Medical Programs

Visiting the various county organizations and attending county meetings and clinics throughout the state we have found a pleasant task. Somewhat to our surprise these meetings are not of a drab sameness; there is great variety in the mental pictures and impressions which we have received from the different groups. Each group seems to have an atmosphere, even a personality, of its own.

These county visits, with the opportunity to "listen in" at so many points throughout the state, have confirmed a belief which we have long entertained, that the people of Maine do not need to go outside of the state for medical advice and care. We find men in every group in every quarter of the state giving to their patients the highest type of medical service.

The character of medical meetings has greatly changed within our recollection. The thesis and long disquisition have happily about passed into the discard. Dull, indeed, were the evenings spent relating and listening to elaborate textbook descriptions of this or the other disease. Perhaps one of the best medical meetings we have ever attended was one where there was

no speaker. A topic was assigned for discussion, and, in turn, some twenty or thirty members spoke on some phase of the question.

It is so easy to become just a listener. We should in every way encourage more members to become articulate, to take active part in these meetings.

Exchange Bureau of Speakers

The following subjects have been submitted by the Scientific Committee for county programs. Additional subjects will be forwarded to County Secretaries from time to time. A list of the names of those men who have agreed to discuss these subjects has been forwarded to each County Secretary who may consult with this office or any member of the committee at any time for assistance in arranging programs.

"Fracture Problem," "Thoracic Diseases," "Diseases of Rectum and Colon," "History of Medicine," "Medico-Legal Problems," "Duodenal and Gastric Ulcer," "Heart Disease," "Public Health and Immunology," "Intestinal Parasites," "Tuberculosis, Childhood," "The Anæmias," "Diabetes," "Psychiatry."



The Diagnosis of Premature Separation of the Normally Implanted Placenta

By S. R. WEBBER, M.D., F.A.C.S., Calais, Maine

There is a growing conviction among those who deal with such problems, that premature separation of the normally implanted placenta is a lesion of more frequent occurrence than was formerly thought. It is believed that the variation in its incidence as reported by different clinics—figures ranging from 0 in 10,000 labors at the New York Lying-in Hospital to 1 in 92 in a series of 6,453 cases at the Dublin Rotunda—is to be accounted for by missed diagnosis and careless inspection of the placenta, and the higher ratios are more nearly correct. Greenhill states that if cases of partial separation are counted, abruptio placenta is at least as common as placenta praevia. Bethels Solomon contrasts the occurrence at the Rotunda of 41 cases in 1926 with only 6 each in the years 1909 and 1910. Similar reports from other clinics show the same general trend, and it is this evidence of its increasing importance which leads me to present a subject about which there is little new or original to be said.

From the standpoint of diagnosis, what is known of etiology is important. The association of placental separation with toxemia and chronic nephritis is so well recognized that the possibility of its occurrence should be always in mind when dealing with any patient in whom evidences of toxemia or renal damage have been detected. Likewise patients who are subjected to trauma, especially direct violence to the abdomen, are possible subjects.

The first of these etiological factors provides the largest group of cases, but it is to be remembered that others occur due to such conditions, recognizable or not, as pre-existing endometrial disease, uterine tumors, blood dyscrasias and intercurrent acute infectious disease. It should be noted that separation occurs late in pregnancy and that multiparity is a predisposing cause.

The finer details of the mechanism of placental separation are as yet uncertain in spite of considerable investigation and many theories, but the gross pathology is more

definitely known. The first step in the process is an effusion of blood into the decidua basalis, which splits and thus detaches the adjacent portion of the placenta from the uterine wall. At this stage clinical symptoms are slight, and if the process does not advance further the pregnancy or labor may continue uninterrupted. If, on the other hand, bleeding continues, more and more of the placenta is split off until often it becomes completely detached and lies free in the uterine cavity. Clinical symptoms at this stage are marked and urgent. When the increasing hematoma reaches the placental margin blood usually forces its way between membranes and uterine walls and appears externally. It is important to remember, however, that there is not always external bleeding. The extravasated blood may be retained in the uterine cavity when the margins of the placenta remain intact, when the membranes remain attached, when blood ruptures the membranes and forces its way into the amniotic cavity, and when the fetal head is so firmly engaged as to prevent escape.

In addition to these mechanical effects, in fact, probably preceding them, there occur characteristic changes in the body of the uterus. Probably as the result of degeneration and rupture of the walls of small decidual blood vessels, hemorrhage occurs within the substance of the uterine muscle itself and may involve the tubes, ovaries, and broad ligaments as well. This event is of great clinical importance in that, with the separation of its muscle fibres, the uterus loses its contractile power and becomes an inert and sodden mass of tissue.

It must be remembered that these changes may be slight or extensive, gradual or astonishingly abrupt. Their clinical manifestations may therefore be so mild as to pass unnoticed, or so overwhelmingly severe that in a few minutes an apparently normal pregnant woman becomes almost moribund. In the cases which develop gradually, the first

effect of separation is the initiation of uterine contractions which continue until increasing hemorrhage has destroyed contractile power. Then, due to extravasated blood, the uterus assumes a hard, woody consistency which does not relax. There is pain, increasingly severe, at first like labor pains but becoming continuous. External bleeding, usually dark in color, soon appears; and, as the hemorrhage continues, its effect becomes apparent in the patient's general condition. In cases in which blood is retained within the uterus, that organ is larger than normal and the pain is more severe. In other cases, the total process occurs with overwhelming rapidity. Here the story is of sudden, severe, lower abdominal pain with external bleeding and collapse, and examination shows the patient pale, cold, sweating, with a rapid pulse, and a hard, rigid, tender uterus.

Diagnosis is not difficult if the condition is borne in mind. It is to be suspected when any patient at or near term begins to have abdominal pain and external bleeding. It is to be diagnosed when, in addition to pain and bleeding, there is a continuously hard and tender uterus.

Since we are concerned here mainly with diagnosis, treatment cannot be considered fully, but a word may not be out of place. The important consideration is the control of hemorrhage and the correction of acute blood loss. It is manifestly impossible to control bleeding from a non-contractile uterus from below, nor is it possible accurately to predict the degree of intramuscular hemorrhage from the severity of symptoms. Therefore any case with symptoms definite enough to warrant the diagnosis should be subjected to immediate Caesarian Section, and if, after evacuation of its contents, the uterus does not contract promptly and efficiently, it should be removed by supravaginal hysterectomy. Blood loss is combated by the usual means, including transfusion before, during, or after operation, as the individual patient's need demands.

The following examples illustrate placental separation as it has occurred in my own practice and in that of my colleague, Dr. W. E. Gray, to whom I am indebted for the privilege of having seen his cases and for permission to report them:

CASE No. I

The patient was a multipara, 24 years of age, within three weeks of term. Three preceding pregnancies were normal and terminated with normal labor. There was no evidence of toxemia during the present pregnancy. Four hours before her admission to hospital, she was suddenly seized with severe lower abdominal pain, which was continuous, not localized and not radiating. The onset of pain was promptly followed by vaginal bleeding, moderate in amount. Examination showed the general condition good; temperature and respiration normal; pulse rate 100; blood pressure 110 systolic, 60 diastolic. The uterus was the size of a full-term pregnancy, but was hard and did not relax. It was everywhere tender to touch. The fetal heart was heard. Caesarian Section showed the placenta separated for about half its area. The uterine cavity contained a large amount of blood clot and the uterus itself showed patches of bluish discoloration, chiefly on the posterior surface. It did not contract well and was therefore removed. Uneventful recovery followed.

CASE No. II

Patient was a multipara, 30 years of age, within a few weeks of term. Her past obstetrical history was normal. The history of the present pregnancy was unknown, because the patient was not seen until the onset of the present illness. Eight hours before admission, she was seized, without warning, with severe pain in the lower abdomen, and shortly afterwards began to bleed externally. The pain was constant and there was continuous dribbling of dark blood from the vagina. Examination showed a woman severely ill. She was pale, though not blanched, the pulse rate was 120, and respirations were 32. The uterus was woody, hard, and exquisitely tender. The fetal heart was not heard. Caesarian Section was done immediately. The abdomen contained a considerable quantity of blood-stained fluid. The entire uterus was purplish-blue in color and larger than normal. In the region of the fundus the peritoneum was split longitudinally for about four inches. There was ecchymosis and edema in both broad ligaments. The placenta was completely detached, lying free in the uterine

cavity, which contained also a large amount of blood clot. The fetus was dead. Supravaginal hysterectomy was done and the patient made an uneventful recovery.

CASE No. III

The patient was a primipara, 24 years of age, at term. Her pregnancy was normal throughout. Ten days before admission to the hospital, she began to have mild recurrent abdominal pains which she felt were labor pains. They did not progress, however, until the day of admission, when she entered the hospital in fairly active labor. It was noted at this time that the uterus was harder and relaxed less completely than normal. There was slight tenderness. During the evening there was fairly good labor, with a slight flow of blood at 10.00 P.M. Next morning the hardness and tenderness of the uterus had increased and the pain was no longer intermittent. Examination showed no dilatation of the cervix, and the examining finger brought away dark blood. The fetal heart was heard. It was felt that a partial separation of the placenta had occurred, and this diagnosis was confirmed at operation. The placenta was found high in the fundus, detached for about one-third of its area. There was no intramuscular hemorrhage. The baby was living. The uterus was not removed. Recovery was complete.

CASE No. IV

The patient was a multipara of 28, Jewish, about seven months pregnant. Her past obstetrical history was stormy. Six pregnancies had produced but one living child. The diagnosis of chronic nephritis had been made some years before elsewhere, and albuminuria and hypertension of 160 systolic had been noted throughout the present pregnancy. She was taken ill on the day of admission with severe abdominal pain and bleeding. When first seen, six hours after the onset, she was gravely ill. She was blanched, sweating and dyspnoic, and complained bitterly of abdominal pain. The pulse rate and respiration were markedly increased. The uterus was board-like and extremely tender. The fetal heart was not heard. At operation the uterus was found larger than a normal seven months'

pregnancy. Its anterior surface was mottled with dusky-blue patches. The posterior surface was everywhere a greenish-purplish-blue, with ecchymosis and edema extending into both broad ligaments, most marked on the left. There was free blood-stained fluid in the abdominal cavity. The placenta lay free within the uterus, which contained also much clotted and fluid blood. The fetus was dead. Hysterectomy was felt advisable, but was not permitted by the relatives. Pituitary extract and ergot were given intramuscularly. No serious bleeding followed and the patient recovered.

CASE No. V

The patient was a primipara of 21, within a month of term. She had been carefully watched at home by her own physician and was sent to the hospital for increasing symptoms of toxemia. She had had marked edema of the feet and legs for five weeks preceding admission, albuminuria and elevation of the blood pressure for four weeks, and visual disturbance of the left eye for two weeks. The day preceding admission she complained of moderate abdominal pain and slight flowing. On examination the patient presented a picture of profound toxemia. She was stupid and drowsy; there was generalized edema; the left eye was blind and vision of the right greatly diminished; the uterus was hard, tender, and did not relax. There was profuse vaginal bleeding in gushes of dark blood. The systolic blood pressure was 210 and the diastolic 104. The urine was loaded with albumen, blood and casts. Operation showed the abdomen contained much clear fluid. The anterior surface of the uterus appeared normal, but the posterior was ecchymotic and hard. The placenta was separated from the uterus by a large clot, equalling the placenta in size, about two and one-half inches thick, thinning toward the periphery. The fetus was dead. The uterus contracted well and it was not thought necessary to remove it. Complete recovery followed.

CASE No. VI

A multipara of 36, the mother of thirteen living children, was seen shortly after the fourth of a series of eclamptic convulsions. Nothing was known of the history of her

pregnancy, except that on the preceding night she had complained of headache and epigastric pain. Next morning she became comatose and began to have convulsions. When seen she was in deep coma with stertorous, rapid respiration, generalized edema, twitching of facial muscles, and rapid pulse. The uterus was so rigid that fetal parts could not be palpated. The fetal heart could not be heard. Blood pressure was 220 systolic and the urine contained much albumen, blood and casts. There was no external bleeding. Caesarian Section showed a uterus larger than normal, with patches of ecchymosis both front and back. The placenta was found almost completely detached and the uterus contained a large amount of blood clot. The fetus was dead. The uterus did not contract well and was removed by supravaginal hysterectomy. Convalescence was stormy. There were two convulsions after delivery, and coma persisted for forty-eight hours. Recovery eventually followed, and the patient left the hospital with a normal blood pressure and albumen free.

CASE No. VII

The patient was a secundipara of 29, at term. There was no evidence of toxemia during pregnancy, but she had been miserable throughout the entire period. During the last month she had had much abdominal pain of an indefinite character and marked abdominal tenderness. The day before admission to the hospital, the pain was more severe than usual and it was noted that the pulse rate was 120. Next day she was admitted and shortly afterwards was seized with severe pain in the back and collapsed. She looked very ill. She was cyanosed and dyspnoeic, and the pulse rate was 140. There was no external bleeding. The uterus was hard and tender, but relaxed occasionally. Fetal movement was felt. At operation the uterus was found firmly contracted, but normal in appearance. The placenta was in the posterior wall with a fresh clot about four inches in diameter separating it from the uterus at its

central portion. The uterine mucosa was ecchymosed, but the uterus contracted well and was not removed. The fetus was living. Recovery was uninterrupted.

CASE No. VIII

The patient was a primipara of 32, within one month of term. Her past history and present pregnancy were normal. One week before admission she had had slight vaginal bleeding. The night before admission she was awakened by a sensation of flowing and found that she had had a moderate hemorrhage of bright red blood. Dribbling continued since that time. There was no actual pain, but a sensation of fullness and discomfort low in the pelvis. The uterus was not hard or tender. It was felt that this was a case of placenta prævia and a Caesarian Section was done ten hours after the initial hemorrhage. The placenta was found low down on the posterior wall and was separated from the uterus for about two-thirds of its area by a large, thick, black blood clot. The fetus was dead. Recovery was uneventful.

CASE No. IX

The patient was a multipara of 34, at term. Her present pregnancy had been normal throughout. After lifting a large tub of water on the afternoon of admission, she felt a sudden sharp pain in her lower abdomen, which was not localized and lasted about twenty minutes. It did not recur, but was followed by profuse bleeding from the vagina. Examination showed the patient's condition good. The uterus was tender, but not rigid. There was no labor and there was fairly profuse hemorrhage. It was felt that the diagnosis lay between placenta prævia and premature separation. Caesarian Section was done four hours after the onset of symptoms. It showed a placenta low-attached, but not presenting over the os, and a separation of the lower margin involving about one-half of the placenta. It was not felt necessary to remove the uterus. The baby was living. Complete recovery followed.



**Modern Tendencies in Infant Feeding*

By EDWIN T. WYMAN, M.D., Boston, Mass.

Artificial feeding of infants has been, is, and probably will continue to be a much discussed subject. Our opinions regarding it are constantly changing and developing. The first and most fundamental of the principles of artificial feeding is that infants should never be artificially fed unless it is absolutely impossible to obtain human milk, especially during the first few months. This is nature's food and no artificial food can absolutely take its place. All such foods are merely substitutes, varying only in the degree of their unsuitability. Nevertheless, on account of the considerable limits of tolerance of the normal infant's digestive tract, most infants can be made to thrive on proper artificial food.

The artificial food for an infant contains only a few food elements. These are fats, carbohydrates, proteins, salts, water and vitamins. The carbohydrates are divided into sugars and starches. The artificial food must contain some or all of these elements. They cannot contain anything else which will serve as food. The artificial food must contain enough of these elements to provide a sufficient number of calories to meet the caloric needs of the individual infant at the given time. Furthermore, these calories must be provided in a form which the infant can digest, absorb and utilize. The food must also contain a sufficient quantity of proteins to meet the infant's protein need. If the food does not contain the required amount of proteins, the infant will not thrive, no matter how high the caloric value of the food.

It would seem as if an artificial food which contains the same food elements in the same proportion in which they are present in human milk would be a perfect food and serve as well as human milk. Such a food can be prepared, but it is not human milk. It differs from human milk in the emulsion and composition of the fats, in the character of the proteins, in the enzymes, in the serum reaction, and probably in its vitamins.

The percentage method of feeding was primarily developed to produce a milk like breast milk, relatively rich in fats and carbohydrates and relatively poor in proteins. By varying the amount of cream, skimmed milk, using different forms of sugar or by adding cereal waters, any proportion of the various food elements could be easily obtained and the food fitted to the needs of the individual baby. In deciding what artificial food to give a baby, it was first necessary to determine what percentage of fat, sugar, starch and protein it was to contain, and how much food the infant would need in twenty-four hours. It was necessary to check the calories contained in the formula in order to see that it contained enough calories to supply the baby's caloric needs and to avoid underfeeding and gross overfeeding.

In skilled hands, the percentage method of calculation worked well, and of course we all realize that fundamentally percentages are the basis of all methods of feeding. However, it required a lot of figuring in individual cases, and it has been found that the small changes in percentage formerly used was hardly necessary. While higher percentages of fats and sugar can be used with lower percentages of proteins than in the dilution of whole milk, proteins in excess are less likely to cause digestive disturbances than either fats or sugar. In unskilled hands, the percentage method of calculation may have errors in the calculation or in percentage of cream in the formula, and an excess of fat may cause a very severe digestive disturbance.

The method of calculation generally used at the present time is much simpler, more easily taught, and, except for being unable to use a smaller percentage of proteins than that contained in a whole milk dilution, all other variations in the formula can be made that are possible in the percentage method of calculation.

In this method of calculation, it is first necessary to determine the caloric require-

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ments of the infant. This is forty-five to fifty calories per pound of body weight. Next find the twenty-four hour amount of cow's milk required to cover the infant's protein needs. This is approximately one and one-half to two ounces of milk for each pound of body weight. Whole milk is reckoned at twenty calories per ounce, so the number of ounces of cow's milk used in the formula multiplied by twenty will give the number of calories contained in the milk. Now subtract the calories contained in the milk from the calories required for the infant and we have the calories to be supplied by the sugar to be used in the formula. All sugars are reckoned at one hundred and twenty calories per ounce so the calories to be supplied by the sugar divided by one hundred and twenty will give the number of ounces of sugar to be added to the formula. Cane sugar is measured two level tablespoonfuls to the ounce, milk sugar three level tablespoonfuls, and the various dextrin-maltose preparations four level tablespoonfuls to the ounce. Now that we have found the amount of milk and sugar to be used, the next thing is the amount of diluent to be used in the formula. The average baby requires from two and one-half to three ounces of fluid in twenty-four hours for each pound of body weight, and two ounces for each pound during the latter months of the first year. So enough water should be added to the formula to bring the total amount of the formula to the baby's twenty-four hour requirement. The percentages in the formula can be reckoned as checks on the formula if desired, considering the whole milk used in the formula as 4% fat, 4½% sugar, and 3½% protein. This check of the percentages is especially useful in avoiding excess of sugar, which should not in the normal feeding be over 7% or 8%. If the percentage check is not used, another good rule is that the added calories in carbohydrates should not be in excess of one-third of the total calories in the formula. For example:

Normal baby weighing ten pounds

10 weight x 45 cal. equal 450—cal. required.

10 weight x 1½ milk equal 15 oz. milk required.

15 oz. milk x 20 cal. in one oz. milk equals 300 cal. supplied by milk.

450 total cal. minus 300 milk cal. equals 150 cal. to be supplied by sugar.

150 cal. supplied by sugar divided by 120 cal. in one ounce of sugar equals 1¼ ounces sugar to be added to formula.

10 lb. weight x 2½ equals 25 oz. fluid required for baby.

25 oz. minus 15 oz. milk in formula equals 10 oz. water needed.

Formula would be:

Milk, 15 ounces.

Sugar, 1¼ ounces.

Water, 10 ounces.

While the average baby requires forty-five calories per pound of body weight, some require more. Babies underweight for their age may require fifty-five or sixty, and premature and older undernourished infants may require as high as eighty or ninety calories per pound of body weight. Babies cannot be fed by rule. No two babies are alike. Each one has its own peculiarities of digestion as well as of face, form, disposition and character. Infant feeding is a difficult proposition, requiring study, thought and intelligence. It is no more difficult, however, than other branches of medicine, and the results obtained will repay one for the time and thought given to it.

While most infants thrive on whole mixtures prescribed by the method described, some will not. If the fats are at fault, the percentage of fat in the formula can be lowered by using a 2% milk (one-half whole milk and one-half fat-free milk) or a fat-free milk (lower one-half of quart), the 2% milk being reckoned at fifteen calories per ounce, and the fat-free milk at ten calories per ounce. The character of the fats cannot be changed except in so far as the milk of different breeds of cows is concerned. In general, the milk of the Ayrshire and Holstein is more suitable for babies than that of the Guernsey or Jersey, because the milk of Ayrshire and Holstein cows contains globules of fat smaller in size and a smaller proportion of volatile fatty acids than does the milk of other breeds and the proteins are more apt to form soft curds.

The milk from which a baby's food is to be prepared must be pure. It is impossible to prepare a suitable food from dirty milk, no matter how carefully it is modified. One

should obtain the purest milk possible for babies, and unless the formula is boiled, the milk should be pasteurized.

The tolerance of the normal infant for sugar is so great that much latitude may be used, provided unduly large amounts are not given.

Milk sugar is the natural sugar for infants. It is more slowly and completely absorbed by the infant than the other di-saccharides. Being more slowly absorbed, it favors more than others the development and persistence of the normal intestinal flora. Moreover, few organisms other than those found normally in the intestinal tract of infants can utilize lactose before it is broken down, while many utilize the other sugars. Milk sugar may, in some instances, cause and keep up fermentation. When this happens, one of the various compounds containing dextrin and maltose should be used in its place. These preparations are sometimes preferable when the sugar is desired to be more quickly broken down and absorbed than the milk sugar. Under these conditions glucose is sometimes even better than the dextrin-maltose preparations. There is no advantage in using cane sugar except in its price. Karo is an easily utilized sugar and is quite extensively used in normal feeding cases.

There is no doubt but that the infant is able to digest starch at birth. The ability does not show, however, that the infant needs starch in its food or that it is advisable to give it to him. It does show that there is no physiological contraindication to it if there are reasons for using it. The chief reasons for using starch in the young infants are (1) gradually to raise the starch tolerance to prepare for the cereal to be added to the diet a little later and (2) the colloidal action of starch in preventing the formation of large casein curds, thus aiding in the protein digestion. In certain instances of sugar fermentation, starch is most useful, in that it is so much more slowly broken down than the simpler carbohydrates. Starch can be added in the form of barley, oat, or wheat flour, farina or cream of wheat. It can be added to the formula as cereal water in place of the diluent or can be added as dry cereal and the whole formula cooked in a double

boiler for thirty minutes. It can be added to the formula one to four level tablespoonfuls to the quart of formula, the amount depending on the indications for it.

Proteins are the only food elements which replace the tissue waste of the body and from which new tissue can be formed. They are, therefore, absolutely necessary for the repair and growth of the body. They may also serve as a source of energy. It is the formation of the large casein curds which renders the digestion of the protein of cow's milk so difficult for many infants. There are many ways for preventing the formation of these curds, viz., boiling, the addition of starch, the addition of alkalies such as lime water and bicarbonate of soda, pancreatization of the food, breaking up the curd mechanically as is done in protein milk or by using lactic acid or buttermilk. The way in which the formation of large protein curds is prevented in these various procedures is very different, but the end result is the same with all of them so far as the prevention of curd formation goes, although for other reasons some one method may be preferable in individual instances.

In deciding what artificial food to give a baby the physician should be influenced by the story of what the baby has had to eat in the past, the character of the stools and the weight. He should try to fit the food to the needs of the individual baby. This fitting of the food to the needs of the individual infant is the most important point in the artificial feeding of infants.

While, as previously stated, most normal babies can be made to thrive on simple dilutions of cow's milk with the addition of various carbohydrates, one is often confronted by various maladjusted cases. In order to treat these cases the physician must have a wide range of food from which to choose to meet the requirements of each individual case. Dried milks, reconstituted milk, evaporated milk, condensed milk and various proprietary foods all have their place in infant feeding. In evaporated milk, for example, we have a cow's milk product with changes brought about in the process of fabrication of such a nature as to render it easier of utilization by the infant's gastrointestinal

system than fresh cow's milk. It can be modified in the same way as whole milk mixtures and often serves the purpose until the baby's digestion can handle a whole cow's milk mixture. I feel, however, the fresh cow's milk is better for long-continued feeding than any of these more stale foods.

Most babies weighing over seven pounds can be started at four-hour intervals of feeding, though in smaller and weak infants it is sometimes best to use three-hour intervals. Cereal should be started when the infant has reached the age of four or five months, although it is sometimes advisable to start a small amount of starch in the formula at two to three months. When cereal is given, it is best to start with cream of wheat or farina, one to two tablespoonfuls at ten in the morning and six in the afternoon with some of the formula poured over it, followed by the rest of the formula. At this age it will take about a month to teach the infant to take the cereal from a spoon well. Vegetable soup, egg yolk, strained vegetables (spinach, carrots and string beans), should be started at five or six months, given at the two o'clock feeding in the afternoon. Baked banana, prune pulp, apple sauce and junket can be given at about the same age. Potato, whole egg, chicken, lamb chop, and beefsteak, finely chopped and mixed with the vegetables, should not be given until the infant is a year old.

It has been found that there are fifty-nine different elements and chemical compounds necessary in the diet for proper nutrition and development of the normal child. There is little need of worry about any of these with a child over two years of age on the average American diet. The only danger in children over two is that if the child gets too much sugar or starchy foods he may necessarily

take too little of the foods containing more of the elements necessary for proper nutrition and development.

In infants under two years, however, one has to think of the vitamins A, C and D. It is rare for a baby to have vitamin A deficiency, but it does occur usually in infants with a severe fat intolerance, where, from necessity, the formula has been low in fat.

Scurvy is not at all uncommon, and where most of the milk used in infant feeding is either boiled or pasteurized, all babies should have orange juice, or if orange juice is not tolerated well or is not available, tomato juice. Orange juice should be started when the baby is from two weeks to a month old, beginning with one-half ounce and gradually increasing to one to two ounces a day. If tomato juice is used, twice the amount is necessary. Most babies in this latitude do not get enough sunshine, especially during the winter months, and, therefore, lack vitamin D. Babies born in the fall, premature babies and twins are prone to have rickets without the administration of vitamin D. Vitamin D can be supplied by the administration of cod liver oil, Viosterol, vitamin D milk and sun baths (direct sunlight during the summer or sunlight through ultraviolet transmitting windows during the winter). If cod liver oil is used, it will supply both vitamins A and D. It should be started when the baby is one week old, starting with a teaspoonful and gradually increasing to two teaspoonfuls at a month and a tablespoonful a day at six months. Of course the amount can be varied according to the time of year, depending on the amount of sunshine the baby receives, but for the average infant this amount is not excessive.

Simple Laboratory Tests for the Practitioner

By SAMUEL H. PROGER, M.D., Boston Dispensary

Following is a brief discussion of several clinically important, yet simple laboratory tests, chosen because of their general value as demonstrated in the Boston Dispensary Medical Clinic.

Blood Sedimentation Rate:

In recent years the measurement of the blood sedimentation rate has come to assume a role of real importance in clinical diagnosis. This test consists briefly in filling a

pipette with citrated blood, and measuring the rate at which the cells sink and the clear layer of plasma forms. The method is as follows: Blood is withdrawn by venipuncture from the uncongested vein into a syringe containing 0.4 c.c. of 3% sodium citrate solution, to the 2.0 c.c. mark. The content of the syringe is thus one-fifth citrate solution and four-fifths blood. One c.c. of this citrated blood is then drawn into a 1 c.c. pipette, 30 cm. in length, and with a lumen of 2.5 mm. The pipette is then placed on a stand and the length of the clear layer of plasma is read off at one, two and twenty-four hours. There is normally a sharp line of demarcation between the cells and the clear plasma. This is the method as advised by Westgren. It is the method of choice in most of the clinics abroad and has been found entirely satisfactory at the Boston Dispensary. While readings are advised at one, two and twenty-four hours, probably only the one hour reading is of value. The normal sedimentation rate in one hour with this method is from 3 to 9 mm. for males and from 7 to 12 mm. for females.

Unquestionably this test has its greatest usefulness in pulmonary tuberculosis, where it serves as an accurate index of the activity of the process, the sedimentation rate becoming more rapid as the infection increases in activity. A diminution in the blood sedimentation rate in pulmonary tuberculosis is always a good prognostic omen and indicates that healing, induration and scar tissue formation are taking place.

In purulent and inflammatory conditions of the more severe type, the blood sedimentation rate is distinctly increased, as in polyarthritis, scarlet fever, septicemia, etc. In the early stages of typhoid fever, the sedimentation rate is not greatly increased, so that a rapid sedimentation rate in the first two weeks should lead one to suspect some complication, especially broncho-pneumonia. In general, it may be said that the sedimentation rate is increased in all febrile states and in the anemias, diabetes, carcinoma and nephrosis.

The only physiological variation of importance is the marked increase which occurs in pregnancy after the third or fourth month,

when the rate is usually as high as 40 to 50 millimeters. In fact, the blood sedimentation rate was first introduced by Fabrius in the belief that he had discovered a test for pregnancy.

Some of the more important factors upon which the blood sedimentation rate is dependent are as follows:

1. THE AMOUNT OF GLOBULIN AND FIBRINOGEN IN THE SERUM. This is probably the most important factor. As these plasma proteins become relatively increased as compared to serum albumin, the blood sedimentation rate becomes more rapid.

2. THE SIZE OF THE RED CELLS. The cells of larger size fall more rapidly.

3. THE NUMBER OF RED BLOOD CELLS. As the number of cells increases, the sedimentation rate decreases.

4. THE HEMOGLOBIN CONTENT OF THE CELLS. The cells with greater hemoglobin content are heavier and sink more rapidly.

5. ACIDOSIS. With increasing acidosis, the sedimentation rate is decreased.

6. CHOLESTERIN CONTENT OF THE BLOOD. As this becomes increased, the cells settle more rapidly.

Urobilin and Urobilinogen in the Urine:

The liver cells form and secrete bile continuously into the bile capillaries. From these capillaries the bile reaches the intestine through the larger biliary passages. Among the constituents of bile is bile pigment, the iron-free bilirubin, which is an end product of hemoglobin metabolism, and which is found normally in the blood serum to about 0.5 mgm. per cent. This bilirubin in the intestine loses its pigment to the feces and by bacterial action becomes urobilinogen. Urobilinogen is transformed into urobilin, which passes into the blood stream, reaching the liver through the portal vein. As a result of absorption, very small amounts of urobilin are normally found in the urine, not enough, however, to give positive responses to the ordinary tests for this substance. In the liver, the urobilin is almost entirely converted into bilirubin, which is again excreted as a bile constituent into the intestine. There is thus this entero-hepatic circuit, the break-

ing of which, either by liver disease or by total obstruction to the outflow of bile, may be suspected or demonstrated through the tests to be described for urobilin and urobilinogen in the urine. Thus in jaundice, due to obstruction of the common bile duct as from stone or malignancy, or to obstruction of the bile capillaries as in the so-called "catarrhal jaundice," no bile and therefore no bilirubin reaches the intestine, so that no urobilinogen or urobilin is formed. In jaundice of this type, therefore, a test will reveal no urobilinogen or urobilin in the urine. In jaundice, however, due primarily to hepatocellular degeneration as in toxic hepatitis, the liver cells are unable to function adequately and thus fail to convert completely the urobilin into bilirubin. There is excessive absorption of urobilin and urobilinogen into the blood stream and the liver dysfunction is made manifest by positive tests for urobilin and urobilinogen in the urine, not only in jaundice, but in all conditions in which there is damage to the liver cells and therefore a disturbance in the ability of the liver cells to convert urobilin into bilirubin, an excess of this urobilin or urobilinogen will be found in the urine.

As a test of a partial function of the liver, the examination of the urine for urobilin and urobilinogen is of distinct value. Its greatest fault lies perhaps in its over-sensitivity. Thus in hunger and after a meal rich in proteins, urobilin and urobilinogen may be increased in the urine, though the liver cells remain intact. Conditions in which urobilin and urobilinogen are found in the urine with the tests to be described, other than those affecting primarily the liver, are: (a) Diseases of the gastro-intestinal tract, such as carcinoma or acute gastro-enteritis; (b) scarlet fever (here it may be of differential diagnostic importance); (c) acute fevers (cloudy swelling of the liver cells); (d) heart failure (liver congestion); and (e) acute gall bladder disease (involvement of the liver cells in the infection).

Test for Urobilinogen. A fresh specimen of urine is examined. A few drops of a 2% solution of dimethyl paramino benzaldehyd (Ehrlich's reagent) in 5% HCl. is added to about 5 c.c. of the urine to be tested. In the

presence of an excess of urobilinogen, a deep red color immediately sets in. In the normal urine, this color reaction may be obtained on heating. In the complete absence of urobilinogen, as in total occlusion of the common duct or in severe diarrheas, the color fails to appear even after heating.

Test for Urobilin. To about 10 c.c. of urine add an equal amount of Schlesinger's reagent (10 gm. of zinc acetate in 100 c.c. alcohol—the cloudy solution is to be shaken before using), and filter. In the filtrate a greenish fluorescence indicates the presence of an abnormal amount of urobilin. The addition of three drops of a 5% alcoholic solution of iodine to the 10 c.c. of urine before the Schlesinger's reagent is added will make the test more strongly positive since the urobilinogen which is present is transformed by this procedure into urobilin.

Hemoglobin:

The two means most commonly employed for estimating the hemoglobin in the blood are the Tallquist scale and the Sahli hemoglobinometer.

The widely employed Tallquist method consists first in staining a piece of filter paper with the blood to be examined, and then matching this paper to the corresponding shade of red on the Tallquist scale. The various shades represent varying percentages of hemoglobin. At least one square centimeter of filter paper should be stained. Compared with the Newcomer method, the Tallquist method is found to give too low results on blood with a high content of hemoglobin, and too high results in cases of severe anemia. This method determines the presence of anemia, but it is too inexact to follow the changes in the hemoglobin during treatment.

With the Sahli method, a standard solution is used with the same coloring matter as is present in the blood, in a concentration corresponding to a 1% solution of normal blood. This standard solution is sealed in a graduated glass tube. A similar accurately graduated tube is filled to the mark 10 with N/10 hydrochloric acid. With a capillary pipette 20 cu. mm. of blood are introduced into the tube and well shaken. The mixture becomes practically clear and pure brown in

color after the lapse of one minute. Water is added until the shade of the mixture exactly corresponds to that of the standard solution, when the hemoglobin percentage may be directly read off. There are slight differences in technique given by various authors. The method described above is as recommended by Sahli, and therefore is considered authoritative.

The warning is frequently given that the standard solution should not be unduly exposed to light, as the color may fade. According to Sahli, the standard solution does not pale, and if there has been no error in its manufacture the standard solution is permanent. He calls attention, however, to the fact that the standard solution is only a suspension and not a true solution, so that a sediment forms after long disuse and the tube must then be shaken. If it is not shaken, of course it may appear to have become paler. If, instead of the standard solution, a solid colored rod is used for comparison, the readings will vary, depending on whether artificial or daylight is used, the readings being somewhat higher in artificial light. Sahli does not approve of the colored glass standards. Because of such differences and because almost all other determinations of blood content are reported in some unit per 100 c.c. of blood, Cullen has recently recommended that hemoglobin values be reported in grams per 100 c.c. of blood.

It is well to remember that the various methods of hemoglobin determination are based on different standards, so that, for example, with the Dare hemoglobinometer at one extreme 100% hemoglobin means 13.77 gm. per 100 c.c. of blood, while with the Sahli hemoglobinometer at the other extreme, 100% hemoglobin means 17.2 gms. per 100 c.c. of blood.

The Schilling Differential Count:

The ordinary routine examination of a stained blood smear includes a differential count of the various white blood cells. If we examine the polymorphonuclear leukocytes with somewhat more attention than usual, we shall see that a few of them (from 2% to 5% of the total white cells) show no sharp lobulation, but instead resemble a thick *S* or

U. These are immature polys. A patient with an acute infection, such as an acute appendicitis, always shows an increase in the percentage of these cells, so that not 2% or 3%, but 10, 20, or even as many as 60% of the leukocytes are young polys of this configuration. So constant is this phenomenon that it can be said with assurance that if we find no increase in these young polys or "band forms," the conclusion is justified that no purulent infection is present. Although the percentage increase varies in different types of infection, and is associated with other highly significant changes in the differential count, it is roughly true that the severity of the infectious process may be directly gauged by the number and variety of band forms present in the blood smear.

The theory which has been evolved to explain this phenomenon is that when infection invades the body, the polymorphonuclear leukocytes leap to its defense. With the growing menace of a more severe infection, the army's numbers are increased by a call upon the bone marrow reserve, and more polymorphs are sent out into the circulating blood. If their numbers are still insufficient to repel the invader, it becomes necessary to call the younger classes to the colors. When the supply of adult polys is exhausted, the young polys are enlisted, and when still more reinforcements are needed, the metamyelocytes appear. In cases of fatal peritonitis, the gravity of the situation may sometimes be first apparent when it is seen that even the infant myelocytes have left the bone marrow and have appeared in the blood smear. There is no doubt that such a sequence occurs.

In 1911, Viktor Schilling introduced this differential count in which the various types of polys are considered separately. He placed the myelocytes in one group. In his second group, which he called young forms, he included the myelocytes with indented nuclei or thick sausage-shaped nuclei. His third group is composed of those polys which show a more pyknotic nucleus, usually *U* or *S* shaped, but never divided into two or more nuclear masses connected by nuclear strands. These he called band forms (*Stabkernige*). All polymorphs consisting of separate lobes connected by such strands, no matter how

great their number, he groups together as "segmented polys." In making a differential count, the only difference from the ordinary division, as universally used, lies in the fact that the polymorphonuclear cells are subdivided into two or sometimes three groups, *i.e.*, segmented polys, band forms, and young forms.

This method of counting the leukocytes has gradually attained recognition and use in Germany, especially during the past few years, but it remains to-day practically an unused and all but unknown procedure in this country. Still, for many years Pincus, in his textbook, and others have advocated the routine use of the method, as must anyone who has had experience with it. The value of the white count is common knowledge. The relative value of the Schilling differential count, compared with that of the white count, is similar to that of a temperature chart, in the evaluation of fever, compared to feeling the patient's forehead with the palm. In our own clinic, Dr. Buck has gathered many cases which serve as convincing evidence of the value of this type of differential count, and this discussion is taken largely from a recent address by Dr. Buck reporting his experiences with the Schilling count.

Method. The following method for preparing the smear for examination is satisfactory in every respect. A clean glass slide is held between the thumb and second finger of the left hand. A drop of blood is taken from the ear on one end of this slide. A narrow cover slip (20 millimeters) is used as a spreader, being held at an angle of 45 degrees in respect to the end of the slide bearing the drop. The edge is approximated to the drop, and a smear made in the usual manner. In counting the leukocytes, four areas are chosen, as far removed from each other as possible, and in each of these, 25 cells are counted along the course of a meandering path, as illustrated in the diagram (Fig. 1). If done in this way, it is sufficient in all cases (except when it is necessary to check accurately a very slight variation from the normal) to count 100 cells. If the ordinary cover slip method is used, it will be found that the differential counts will not check satisfactorily unless three to five hundred cells are counted.

The smear is stained with Wright's solution. A differential count of the leukocytes is made as follows (normal values are given in parenthesis): basophiles (0-1); eosinophiles (2-4); neutrophils, myelocytes (0), young forms or metamyelocytes (0-1), band forms (3-5), segmented or normal adult polys (58-66); lymphocytes (21-25); monocytes (4-8).

Kidney Function:

Of great practical importance is the relatively simple dilution and concentration test for kidney function. It is a test of proved clinical value, being employed in one form or another in a large number of the foreign clinics, while it is rapidly coming to be recognized as of great value in this country. The test, because it is so sensitive and because it is so easy to perform, no special laboratory equipment or technical ability being required, obviously has a wide applicability.

The test consists in measuring the diluting and concentrating power of the kidneys simply by determining the specific gravity of the urine as it is collected under the conditions described below. The procedure as it is carried out in the Boston Dispensary is as follows: At 9.00 A.M. the patient voids and the urine is discarded. He is then given 1,000 c.c. of water, which he drinks in ten or fifteen minutes. The urine is then collected hourly, for four consecutive hours, *i.e.*, 10.00 A.M., 11.00 A.M., 12.00 noon, and 1.00 P.M. Thereafter the urine is collected every two hours until 9.00 P.M. The urine voided between 9.00 P.M. and 9.00 A.M. the next day is collected in one portion. For lunch and supper, relatively dry food is given; the patient may have his choice of meat, eggs, potato, cheese and toast. If thirst becomes intense, a glass of water (250 c.c.) is allowed after 6.00 P.M. If the response to this test on the part of the kidneys is normal, a diluted urine, corresponding roughly in amount to the quantity ingested, is passed during the first four hours, and a concentrated urine during the rest of the day. The specific gravity normally falls to 1.002-1.005, and the amount excreted during the first four hours is equal to the amount ingested. During the remaining hours of the day, the specific gravity normally rises to 1.020 or above. The

most concentrated specimen passed is examined for albumin. The sediment of this specimen is also examined. Dehydration is eliminated as a modifying factor by having the patient drink six glasses of water each day for two days before the beginning of the test.

Volhard, in 1910, was the first to call attention to the practical value in diagnosis of the dilution and concentration tests. Strauss, in 1920, combined these two tests into a single procedure which could be carried out in one day. Pratt employed a method which was largely composed of details selected from

the procedures of Volhard and Strauss. Pratt, in 1926, was the first to describe in this country clinical experience with the dilution and concentration test of kidney function.

Buck and the author have recently compared this test as outlined by Pratt with other tests of kidney function in a series of one hundred cases. The results indicated clearly the great practical value of the test. A single concentration test such as advocated by Fishberg and Foster, among others, in the experience of Pratt is not so satisfactory as the combined dilution and concentration test.

Social Insurance Impossible to Abolish When Once Established

By DR. EDWARD H. OCHSNER

The worst feature of social insurance is the fact that when this parasite once gets its suckers well fastened into the vitals of a nation, nothing short of either national bankruptcy, a dictatorship, or a revolution will be able to loosen its hold.

Germany, which has had social insurance on its statute books the longest, has for a considerable time been on the verge of bankruptcy. While other facts are operative, we believe that the billion dollars which social insurance costs the nation every year is one of the chief reasons why Germany is unable to make a satisfactory "come-back" to normalcy.

England is not much better off. The chief reason for England's present difficulties is the terrific burden of taxation which she has to carry. One writer says: "A complete understanding of the problems confronting England at the present time involves going back to 1909, when we had just adopted old age pensions and destroyed the foundations of thrift." In 1911, England introduced national insurance, when 3% of its workers were unemployed. After twenty years of operation of the act, 17% of

her workers are out of work. As a partial explanation for this condition let us cite just one example from among scores and hundreds that could be given. A manufacturer found that his orders were only sufficient to give work to all his employees four days a week, so he called his workers together and told them the facts. The workers, however, insisted that they would work only three days a week, in order that they could draw the dole for the other three days. An English writer, commenting on this, says: "It is a great mistake to worry about the much discussed abuses of the system. It is the system which is fundamentally wrong, and abuse is inseparable from it."

To get an idea of the tax burden which England is carrying, we need but cite facts. In that country all incomes of seven hundred and fifty dollars per annum are taxed 25%. Higher incomes carry an additional surtax. Increased taxes have increased the production cost of practically all articles of manufacture, and, as a consequence, have actually increased unemployment, because English industry, carrying this extra burden, has not

been able to compete with other countries in the world markets. In spite of these burdensome taxes and in spite of the fact that living expenses had gone down 11½%, the recent labor government refused to cut the sick benefits 10% and put the nation to the expense and turmoil of a national election practically on this issue alone.

The countries just cited are not the only ones encountering similar difficulties. A recent newspaper article contained the statement that there are more than one hundred and fifty federal boards and commissions in Washington, each with three or more members drawing salaries, and each with a bevy of clerks, most of them just drawing salaries. Many of these were created during the World War. When a few far-sighted individuals remonstrated against the appointment of so many boards and commissions, they were assured that they would all be abolished at the end of hostilities. It is now more than fourteen years since the signing of the Armistice, but not one board has as yet been abolished.

Another illustration is the franking privilege to country newspapers. This privilege was extended to them when it was deemed desirable to disseminate news and information to rural inhabitants, particularly to detached settlements. It was a wise and legitimate enactment at the time, but now it is just a plain nuisance, and yet no congressman would dare to suggest its abolition. It is costing the taxpayer and consumer a great deal of money and serves no useful purpose. A town of ten thousand, and even fewer inhabitants, usually has two and sometimes three local papers, all enjoying this privilege. The local merchants are compelled to advertise in all of them, the expense of which must, of necessity, be passed on to the consumers. Incidentally, this favors the mail order houses to the detriment of the local merchant.

There are many reasons why it is almost impossible to repeal the laws governing such practices. One reason is that executives and legislators do not want them repealed,

because it reduces the power which they derived through political patronage. The more patronage the individual in office has at his disposal, the more difficult it is to dislodge him. Even to-day it is very difficult to defeat a public office holder with large political patronage, no matter how inefficient he may be, except by another who either already has large political patronage or who promises jobs to his supporters irrespective of their qualifications. Thus in many elections the voter is simply left to choose between two undesirable candidates. Already the number of payrollers has become so large and so politically active and influential that they yield great power in both political parties. If we then add compulsory health insurance, we will add further thousands to the lists of our civil employees. Those who are not in government employ will be powerless to control government and their only function will be to pay the taxes which others impose upon them. Instead of increasing the number of government officials and employees, the ideal to be constantly kept in mind and striven for in this country is to permit the private citizen to perform all those functions that he can best perform and that make for independence, self-reliance, and strength of character, and to have the government do only those things which the individual cannot do satisfactorily. We maintain that centralization in government and paternalism have already gone much too far, and that social insurance would simply be another step in the wrong direction.

Another reason why it will be difficult to repeal such laws is the fact that men in the different services of the government do not dare to expose its faults, for fear of being accused of disloyalty. Reports must be couched in the most mild and ineffective language possible, and then they must not be released to the public, but allowed to die as stillbirths in the departments. We all know what happened to General Mitchell, who dared to disregard these rules. Major General Robert Alexander also tells in the introduction to his "Memoirs of the World

War" just how this worked in at least one other instance.

In most countries which have social insurance such laws were first suggested and urged by welfarers, uplifters, and visionaries, who unwittingly played into the hands of practical politicians. Even now few seem to realize that bureaucracy in a republic may become just as unreasonable, oppressive and ruthless as a despotism.

It will be interesting to see whether we shall be able to profit by the experience of others, or whether, as a nation, we belong to that class of human beings who can learn only by dire personal experience or from national disaster.

(The next article will offer a number of counter-suggestions in place of social insurance.)

Commercialism vs. Professionalism

Under this title the *Journal of the Medical Society of New Jersey* relates the story of "One of the large manufacturers of a product extensively prescribed by practicing physicians, and extensively used for that reason, was, it seems, told by the representative of a powerful drug chain organization that it must make certain concessions to 'modern merchandising methods,' or else—. The first thing wanted was an extra discount. This was needed in order that the products in question might be advertised to the public. The advertising was deemed necessary in the interest of both the manufacturer and the chain organization which proposed to handle the products in question. The answer of the manufacturer was that he did not desire to advertise his products to the public. He prided himself that he advertised only to the medical profession. He felt that the public had no business prescribing for itself, even such a good product as he made.

"The retailer urged that goods such as those in question could be sold in larger

quantities by displaying them in windows, advertising them in newspapers, and by the recommendation of clerks. The manufacturer did not want any of those procedures followed."

Such occurrences are an old story to ethical manufacturers, although the practicing physician doubtless is not aware of how much pressure is thus brought to bear.

S. M. A. Corporation not only refuses to participate in such unethical practices, but, in addition, every package of S. M. A. from the beginning has borne this injunction: "Use only on order and under supervision of a licensed physician. He will give you instructions."

Necrology



*Charles Henry Cumston,
Brunswick, 1847-1932*

After a short heart attack, but seeing patients on Saturday, August 20th, our old comrade in medicine, Dr. Cumston, died on Monday, and he has gone on to his reward. He deserves most kindly mention from us

for his fifty years and more of medical service in Maine, and for his leadership in town affairs. Five years ago the citizens of the town gave him a public banquet and a gold watch on his birthday, and the Maine Medical Association their gold medal for fifty years of medical practice. He deserved all that was done for him and said about him on that genial occasion. To this we here add a few words of kindly remembrance, for it was always a pleasure to meet him. When he grasped your hand and looked into your eyes, he revealed his affection for his friends on every side.

A son of Joshua and Ruth Waterhouse Cumston, he was born in Monmouth, November 27, 1847, educated in the public schools and the town academy, and then in Colby, where he was graduated in 1870. He then served as teacher in the Latin High School of Boston, a position which he held for five years. In 1875, he took a course of medical lectures at Bowdoin, and obtained his medical degree at Columbia in 1877. He settled at once and for life in Brunswick, identifying himself immediately with good schools, good sewage for the town, serving on the School Committee several years, as well as on the Town Budget Committee, the Committee of Twelve, opposing a proposed division of the Town Armory, and working for safety at the track crossings of the railroad through the village.

He never took keenly to politics, but was a good conversationalist from his broad and cultivated reading, and he was fond of his many antiques. He was a very friendly man. Knowing you once and liking you, he clung to that friendship for the rest of his life. He was a leader in medical affairs, President of the Brunswick Medical Club, and member of the county and state societies, the meetings of which he attended steadily, and where it was always a pleasure to see him.

He continued to drive a horse and buggy long after the hideous motor cars came into vogue. You couldn't chirrup to any ma-

chine as you could to a good, steady, friendly horse whom you had driven for years, and both you and he being friends.

Many years ago Dr. Cumston married Miss Henrietta Woodward, of Brunswick, daughter of Anthony and Jane Woodward of the village, but she died not long since, so our good friend leaves no family survivors.

Funeral services for Dr. Cumston, held on Friday following his death, were conducted by two personal friends of the clergy, and in the presence of a large audience we looked upon his face for the last time on earth.

J. A. S.

County News and Notes

Cumberland

At the last Cumberland County Medical Association meeting, held at the Eastland Hotel, Portland, on September 30th, Dr. W. B. Turhune, of Stockbridge, Mass., Associate Medical Director, Austin Riggs Foundation, read a paper on "Marital Maladjustments." The afternoon clinic was held at the Maine General Hospital.

On October 4th the regular monthly meeting of the Portland Medical Club was held at the Columbia Hotel. The paper of the evening was by Dr. Elton R. Blaisdell, just returned from Europe, on "Hypertension and Kidney Disease."

Kennebec

The Kennebec County Medical Association met at the Elmwood Hotel, Waterville, October 6th. The afternoon was devoted to a clinical session, taken part in by Drs. Bauman, Boyer, Fish, F. T. Hill, H. F. Hill, McCoy, McQuillan, Risley and Piper.

The evening session was devoted to papers, as follows:

"Traction on Fractures of the Leg," Dr. Frank Bull, Gardner. Discussion opened by Dr. Louis F. Fallon, Augusta.

"Problems Pertaining to Lowered White Cell Counts," Dr. Julius Gottlieb, Pathologist, Lewiston. Discussion opened by Dr. E. C. Higgins, Lewiston.

"The Medical Witness," Dr. John G. Towne, Waterville. Discussion opened by Mr. H. C. Marden, Waterville, County Attorney for Kennebec County.

Oxford

Clinical Day at the Rumford Community Hospital was held October 7th. In the afternoon a clinical demonstration of Bright's disease by Dr. J. H. Pratt, Professor of Clinical Medicine, Tufts College School, was followed by a pathological demonstration of the same disease by Dr. H. E. MacMahon, also of Tufts Medical College. In the evening, at the Hotel Harris, Dr. MacMahon spoke on "Malignant Nephrosclerosis."

Dr. Richard B. Cattell, of the Lahey Clinic, Boston, addressed the Oxford County Medical Association, October 19th, at the Bethel Inn, Bethel.

Penobscot

The Penobscot County Medical Association met at the Bangor House, Bangor, on October 18th, following an afternoon clinic at the Eastern Maine General Hospital. Dr. L. H. Smith, of Winterport, President of the local association, was the speaker of the evening. His subject was "The Therapeutic Use of Glucose." Dr. Smith's paper contained many interesting and valuable observations from the author's experience with the intravenous and subcutaneous use of this agent.

Washington

At Dennysville, for its annual meeting, the Washington County Medical Association convened October 12th. About twenty members were present and enjoyed a paper by Dr. T. S. Moise, of Bangor, who discussed "Gastric Ulcer." Dr. Moise's paper was an excellent setting forth of the present-day method of dealing with this condition.

Dr. Delmont Merrill, of Dover-Foxcroft, President of the Maine Medical Association, gave a very able address on the problems confronting our Association.

Dr. P. W. Davis, Portland, our State Secretary, discussed our local conditions in regard to co-operation with the State Association.

The following officers were elected for the ensuing year:

President—O. F. Larson, Machias.

Vice-President—N. E. Cobb, Calais.

Secretary-Treasurer—P. J. Mundie, Calais.

Censor for Three Years—W. F. Cleveland, Eastport.

Delegate to Maine Medical Association—W. N. Miner, Calais; Alternate, W. H. Bunker, Calais.

P. J. MUNDIE, M. D., *Secretary*.

York

A meeting of the York County Medical Association was held at the Webber Hospital on October 5th. Dr. C. W. Kinghorn, of Kittery, read a paper on "Otitis Media, Acute, with Complications," which was discussed by Drs. F. T. Hill, Waterville, S. E. Fisher, Portland, and W. E. Kershner, Bath.

Dr. E. D. Merrill, President of the State Association, was present and spoke briefly, urging the maintenance of high medical ideals and greater effort to perfect ourselves for service.

Notices

Cocomalt Used in Clinical Tests

Important clinical tests with Cocomalt are being conducted all over the country. Whole groups of undernourished children show substantial gains in weight after taking this food-drink regularly. During the recent drought in Arkansas, for example, health officers fed Cocomalt to youngsters for forty days. At the end of that time, gains of from four to sixteen pounds were noted (depending largely on age). The average gain for the forty-day period was 8½ pounds—more than a pound a week. Children who missed the Cocomalt clinic or attended irregularly *showed no substantial gain*. Cocomalt is a delicious chocolate flavor food-drink that is almost twice as nourishing as plain milk, adding 110 extra calories to every glass. It contains 30 steenbock (300 ADMA) units of Vitamin D per ounce—the quantity recommended for one drink. Cocomalt is accepted by the American Medical Association Committee on Foods. Samples sent to physicians on request. Write to R. B. Davis Co., Hoboken, N. J.

The Cumberland County Medical Association *will meet* October 28th at the Eastland Hotel, following the afternoon clinic at the Eye and Ear Infirmary. The paper of the evening will be delivered by Dr. E. C. Streeter, of Stonington, Conn., on "Lay Contributions to Medicine." Dr. Streeter lectures on Medical History at Harvard.

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THE RED CROSS RALLYING TIME.



Between Armistice Day and Thanksgiving the American Red Cross, our nationally authorized disaster relief agency, holds the annual Roll Call, which is the rallying time of all our citizens who endorse and participate, through their membership dues, in its vast projects of humanitarianism and rehabilitation.

Today's unemployment problems have placed upon the Greatest Mother burdens unexampled in her 50 years of service to mankind. Like all other welfare groups, nationally and through the nation-wide machinery of Chapters and branches, the Red Cross has met an increasing demand upon its resources.

Between early March and mid-September, as Congress-appointed disburser of more than 42,000,000 bushels of Federal Farm Board wheat, voted for relief purposes, the Red Cross has touched the lives of at least one-tenth of our entire population, scattered through every State of the Union, Alaska and the District of Columbia. Today, in the conversion of 500,000 bales of Government-owned cotton into textiles and thence into garments for the destitute, it is engaged in a task well-nigh impossible but for the labors of an army of 100,000 devoted volunteers who are meeting in every city and hamlet to make up these fabrics into garments for the needy of their own communities. Even with this saving, the Red Cross has expended more than \$400,000 in the administrative costs of this colossal project.

Out of all this experience, however, the Red Cross has profited spiritually, as have also those dedicated hosts of men and women who have given with such prodigality of themselves and their means. The evolution of need and action has resulted in the Red Cross getting closer to more people in this country than at any time in its half century's life, not even excluding the period of the World War. In the Pine Tree State, particularly, response has been whole-hearted and instant. Maine is Red Cross conscious. Her people, with characteristic loyalty and enthusiasm, are helping the Greatest Mother to carry on.

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The Official Organ of

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No. 11

Editorial

More Veterans' Hospitals Unnecessary

In the next two decades every member of the medical profession engaged in independent practice and every approved hospital now in existence will be increasingly embarrassed by the activities of the government hospitals caring for our veterans. The expense involved in maintaining the government hospitals now operating is tremendous. The enlargement and equipment of some of these, in order to care for the yearly increasing number of veterans who will inevitably have to be hospitalized, is necessary and should be undertaken, but the building and maintenance of additional government hospitals in numbers and bed capacity adequate to meet the expected demand would impose a staggering financial burden upon the state. Such construction has been proposed, and is one of many present menaces to the economic security of the nation. It is unnecessary and should be actively opposed by all thoughtful citizens.

independent practitioners. With proper planning we are confident that every veteran entitled to medical care at the expense of the government could be served with equal or even greater efficiency and skill in his home community in these existing approved institutions by these independent practitioners. Adequate care and hospitalization of veterans could be thus secured at all times. This solution of a serious problem now confronting us would, we are certain, benefit the veteran, the profession, and the tax-payer.

Immediate stop should be put to the hospitalization at government expense which now goes merrily on under the law, of veterans whose ailments and disabilities are in nowise war and service connected.

Let us adequately care for the veteran, but reduce to an endurable minimum this definite and active competition with hundreds of existing hospitals and with the work of thousands of individual practitioners of medicine.

Existing Hospitals Adequate

There are 2,097 approved hospitals throughout the country and a surplus of

The National Economy League

We call our readers' attention to the fact that the Congressional Investigating Com-

mittee on Veterans' Legislation began its hearings November 15th, and urge that each in his own way express to those in authority his attitude towards this contemplated unnecessary duplication and expense. Acquaint your U. S. Congressmen and Senators as to your convictions on this subject. Let Rear Admiral Richard E. Byrd, chairman of the National Committee of the National Economy League, know how you stand. Join this League if you believe that the reduction of governmental expenditures is essential to the restoration of national economic stability.

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RICHARD E. BYRD, *Chairman*,
Washington, D. C."

*Some Clinical Considerations of Disease of the Biliary Tract

By F. H. JACKSON, M. D., F. A. C. S., Houlton, Maine

Anatomically the gall bladder is not a mere vestigial sac attached to the liver, but is part and parcel of that important organ. The lymph channels between gall bladder and liver are free from any anatomic block and those draining the area of the cystic duct and triangle of Calot follow down the common duct to the under surface of the pancreas. The incised gall bladder will bleed as freely as an incised intestine. By reason of the anatomical arrangement of its ducts, correlated nerve, blood and lymphatic supply, there is a very close "hook-up" between the biliary tract, the stomach, duodenum and the pancreas. Seen clinically and at operation, disease of the biliary tract embraces a closely allied pathological group and is complicated in varying degrees of severity by hepatitis, cholangitis and pancreatitis. It is a very important clinical fact that biliary tract disease may be associated with ulcer of the stomach or duodenum or one of the severe types of appendix disease. Are they compli-

cations of one or the other or a mere coincidence? It is hard to say. The clinical manifestations of an early or mild infection of the gall bladder are notoriously misleading and usually misinterpreted. The more advanced types present a fairly well recognized clinical picture, and a fairly exact diagnosis can be and usually is made from the history and physical examination.

Cholecystography, one of the most valuable aids in diagnosis, seems to me is sometimes asked to carry too much of the diagnostic burden. The test is not infallible, has important limitations in both positive and negative findings with which one must be familiar. Chronic and acute cholecystitis with calculi, empyema of the gall bladder, cystic duct obstruction due to stone or a gall bladder filled with calculi will show positive cholecystographic findings, but as a matter of fact the clinical diagnosis is usually established and the dye test one of confirmation. There is, however, a certain group with symp-

* Read before the Maine Medical Association, June 17, 1932.

toins somewhat vague and indefinite. One has the conviction that the gall bladder is the seat of disease, but the syndrome is masked and certain corollary findings, both subjective and objective, are lacking, so that one hardly feels the strength of his convictions enough to warrant operative interference; you feel fairly certain that such is the fact and valuable evidence can be obtained in this type of patient from a properly taken and properly interpreted cholecystogram, and I am laying stress on the *properly taken* and *properly interpreted*. False negative reports may trap the unwary into a sense of unwarranted security, for definite cholecystic disease has been demonstrated at operation in a large percentage of such cases, and while it may be a bit opinionated, I am inclined to go on the idea that if a cholecystogram backs up my clinical judgment, why well and good; if it doesn't, then I am inclined to follow my clinical opinion. Reference is now made to the type of patient where the clinical picture is quite suggestive, but in which one would like further aid, if possible, from the functional test of the gall bladder. False positive reports, those not backed up by a good clinical picture, are far from uncommon, yet if the report is accepted as evidence that the gall bladder is diseased and operative interference is based upon that hypothesis, harm will be done in the future as it has been in the past. True it is that some of these patients have symptoms that are suggestive of biliary tract disease—they are far from clean cut, and to the careful clinician they immediately suggest other probabilities. Reference is now made to that bizarre group, the neurasthenics, those of the gastrotropic type, together with those with the suggestion of hypothyroidism. Patients with gastric hyperacidity, especially the hyperacidity of peptic or duodenal ulcer, often give positive findings, and even these groups by no means exhaust the list wherein caution must be used when the test seems positive as to disease of the gall bladder but with a far from satisfactory clinical picture. They serve our purpose, however, in calling to mind that blind adherence and implicit reliance in any laboratory test is very liable to result in great embarrassment.

Some few years ago the operation of gas-

troenterostomy occupied a front row position on the surgical stage. To-day the operation is performed for definite reasons, that is, by those who know its true worth in appropriately selected cases, and when thus employed it is of great value. To-day the removal of the gall bladder seems to be in the same relative position, and while it is not as inane as it sounds, a gall bladder removed cannot be replaced; one can, if he is skillful, undo a non or badly functioning gastroenterostomy. It is just as undesirable to advocate and operate upon patients where such a procedure is not definitely indicated as it is to counsel delay when stones are present or deep-seated infection is manifest; both are simply unintelligent. Cholecystectomy removes the major focus of the infection. The evil results of long continued disease of the biliary tract extend far, far beyond that anatomical area, hence many, many patients must have a long continued medical supervision. To omit it is simply doing a poor job and half a one at that. Oftentimes we remove a gall bladder where the clinical findings at operation are such as to make one feel that the result is going to be most happy. As a rule, such is the fortunate outcome, yet there is a group of very puzzling patients who do not do as well as we ourselves or they hoped for. Jordan, of the Lahey Clinic, has devoted a great deal of painstaking work to this group and directs our attention to the need of careful examination of the colon. For lack of any other descriptive term it can be called the irritable or atonic colon, a far from theoretical sort of an affair, and seems to follow removal of the gall bladder sometimes as a sort of unwelcome legacy. Its treatment must be decidedly positive to assure success. Meticulous care as to diet with a minimum amount of medication is required, but fortunately it does respond.

Probably in the average case, as seen at operation, removal of the gall bladder offers the maximum prognosis for future good health. There are exceptions to the rule, if rule one can so style it, for there are conditions wherein radical surgery carries a far higher mortality than is justified. Reference is made to the so-called acute gall bladder. If an operation must be performed, one with

a minimum risk should be employed—removal of the calculi with drainage of the gall bladder—and this same suggestion holds true in cases in which palpation or probing discloses stone in the common duct. Innocent gallstones are a medical myth; they are potentially dangerous, and a gall bladder that contains them often is the seat of a superimposed infection which can progress rapidly to a very dangerous point. If a given infection in the gall bladder has progressed so that we have had a slow dilation of the biliary tree in the liver, this dilation results in more or less impairment of the hepatic function. The mechanism is analogous to the renal impairment in the block resulting from prostatic obstruction. Impose on this partial block a fairly complete one, we have a critical phase in the clinical picture of the given case. Far too many patients of this type of gall bladder disease have been operated upon as emergency cases and far too much attempted at the time. We can take a lesson from the urologist in this type of patient. He learned from bitter experience in his prostatic work what to do, and, what is even better, what not to do. Hence if operative relief must be afforded the patient decompression by drainage is the one of choice for the time being. The majority of these patients can be carried over the crisis or so-called emergency phase by restoring the greatly depleted glycogen reserve in the liver, and while one may hesitate in the face of what seems imperative need for operation, it often will work out for the best. Experience has happily taught me that the same method of procedure will bring about the best results in certain aged people who have gone along for years with certain manifestations of gall bladder disease. They suddenly develop a condition that demands operative interference, either to save their lives or to render their remaining years worth while, and they, too, are rarely fit subjects for the radical type of operation. Just remember the life expectancy of these patients is limited, they present all and more of the hazards of surgery in the aged, for they suffer from the handicap of a decidedly defective hepatic function. The operation can be done with comfort to the operator and minimum shock and distress to the patient with novocaine plus one of the barbital groups. I

sometimes wonder if such an operation is not a correct procedure in younger people who have a definite infection of the gall bladder, but which has not continued long enough so that the come-back power of the gall bladder is not entirely gone and the liver not so seriously impaired.

No operation of election upon the biliary tract should be done without as careful an estimation as is possible of the ability of the given patient to undergo the ordeal. Sometimes, when every possible check-up has been made, things go badly, and he who has had the sad and bitter experience of having what promised to be a most favorable result end speedily, despite all that he could do, can appreciate this statement. Those who happily have not trod such paths—and if they have not it is due to a limited experience in this exacting line of work—are apt to doubt that such events take place. Heyd speaks of them as “liver deaths” and admits of the perplexity in what to do to prevent them, for they sometimes occur in patients whose pre-operative treatment has been careful and thorough. One type is characterized by a condition of practical coma shortly after operation, with a very rapid and persistent rise of pulse and temperature; urea nitrogen is on the rise with a normal icteric index of the blood. Death closes the picture within forty-eight hours. A second type usually occurs in patients requiring drainage of the common duct; jaundice is usually present. Progress seems to be very satisfactory for some seventy-two hours, and then the type of drainage changes from biliary to watery. Delirium ensues, there is pronounced cerebral excitation followed by stupor, coma and death. The question is properly asked, have we induced a reactive hyperemia in an already compromised liver? I don’t know whether the method I employ in cases requiring common duct drainage has any particular merit or not. It seems to have served well in cases where I have employed it. The drainage is not allowed to be continuous; the tube is allowed to run for one hour and then clamped for two. The third type seems to present the symptoms of all the clinical phenomena that we call shock and occurs in patients with more or less complicating pancreatitis. There is marked acceleration of the pulse, pro-

nounced restlessness with a cold and clammy skin. Intravenous dextrose and sodium chloride plus a blood transfusion, if necessary, changes this dark picture into a favorable one.

Sir Berkley Moynihan states: "In the craft of surgery the master word is simplicity." Undoubtedly true, yet those with experience are fully aware of the fact that surgery of the biliary tract can be far from simple. Technical accuracy is demanded absolutely, and while surgery always has been, and always will be, a highly individualistic procedure, there are certain basic principles that cannot be disregarded in surgery of the gall bladder and ducts without courting disaster. That such disasters occur becomes apparent when we read of the ingenious operations devised to repair injuries of the common duct. Rectification to this structure will tax the most ingenious and dextrous when the error is disclosed at time of infliction; it becomes even more difficult when done as secondary operation. There are several postulates very well worth bearing in mind, for they underlie positive principles in operations upon the gall bladder and ducts.

The operative incision must be so planned that the entire area of the biliary tract can be and is mobilized. This reduces the incidence of hemorrhage as well as bringing the operative site into direct view. My personal preference is one that starts at the xiphoid, curves slightly outward with its end about a finger's breadth to the right of the median line, or it may approach that point; the

length is governed by the thickness of the abdominal wall. The rectal sheath is opened the entire length, the muscle retracted outward. A very adequate exposure results with no danger of injuring the nerves to the rectus. The cystic duct must be identified, isolated, traced from the ampulla to the point where it, that identical duct, empties into the common. There must be no doubt or confusion upon this point. We now come to a point where men of ability differ—how to determine the presence of stones in the common duct. Chamberlain, of the Moynihan Clinic, says that it is never necessary to open the duct. Careful palpation and familiarity with the region are all that is necessary. Seelig says it is an illusory procedure to rely upon palpation alone, so it would seem as if those whose results warrant adherence to a certain method should persist in the one that brings them satisfactory results. This also obtains as to whether one removes the gall bladder from above downward or vice versa; both methods have their ardent adherents, but it is a good plan to know both ways. Post-operative hemorrhage, as a rule, injuries to the common ducts, the leaving of calculi in the common ducts and injuries to the closely lying abdominal viscera must be regarded as a serious reflection upon the technical ability of the surgeon. The successful outcome of many cases of biliary tract disease demands close teamwork between internist, roentgenologist, surgeon, and last, but not least, an expert anesthetist.

**The Use of X-Ray Examination in Obstetrics*

By TRUE E. MAKEPEACE, M. D., Farmington, Me.

This is not an orthodox paper for presentation at a scientific meeting. It contains few figures, no tables and no bibliography. I have taken material from many sources and tried to adapt it to the needs of the general practitioner. This paper is written from his point of view and pretends to offer him a valuable source of information about

the obstetric patient. Probably the specialist will find little in it he needs. The general man who cares for all human ailments frequently does not have the time or opportunity to acquire that fine skill in examination, and all too frequently does not have the opportunity to carefully examine the patient until labor has begun. At this time

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vaginal examination and internal pelvimetry automatically rule out the classical Cæsarean as a method of delivery.

Before proceeding to the use of the X-ray in the ordinary case, I wish to enumerate some of the less common conditions in which valuable information may be had. 1. The diagnosis of pregnancy, both intra- and extra-uterine; 2, the diagnosis of twins or triplets; 3, the diagnosis of skeletal defects and monsters; 4, the diagnosis of fetal death; 5, diagnosis of tumors, simulating or complicating pregnancy, and 6, diagnosis of normality before Cæsarean section. This last procedure should never be omitted. It is a heart-breaking experience for everybody to have a section reveal a monstrosity.

To return to the ordinary run of obstetric cases. Parturition is theoretically a physiologic process. Practically, an ever-increasing number of cases vary from the normal, and more and more often the attendant is required to take an active part in the delivery. There is, of course, a broad margin of maternal safety as far as life is concerned, yet a tremendous number of mothers are severely injured and a tremendous number of babies are irreparably damaged or lost in operative obstetrics. Certainly the morbidity and mortality is far too great.

The cause must lie in either the time of intervention, the choice of operative procedure, or in lack of skill on the part of the operator. I personally think that most physicians have adequate manual skill to use forceps or do version and that most surgeons do a pretty good Cæsarean. The time of intervention is sometimes beyond our control, but is usually determined by us and is a frequent source of error. It is poor technique to allow hours of labor delay the performance of, and automatically rule out the possibility of, Cæsarean section until the chance of safe delivery is very small. It is quite as poor technique to rush in when an hour or two more would bring about a successful outcome. But to my mind the chief source of error lies in the choice of method. It is unquestionably poor technique to try

to drag a baby, either head or feet first, through a pelvis which is deformed or entirely too small when a Cæsarean might have been chosen. It shows equally poor judgment to subject the mother to the hazards of section when delivery might be safely expected from below.

These two sources of error, choice of time and choice of method, have an important bearing on each other. The essential, the first, the most important step, is to get the facts. Failure to get the facts I consider to be the real weakness in our obstetric practice. With the facts known, the result will depend upon our skill in making the choice and carrying out the procedure. With the facts not known, the choice is guesswork and the result in jeopardy.

We need definite and accurate information about the shape and size of the pelvis of the mother, the presentation, position, and relative size of the child.

Pelvimetry is of value, but is sometimes misleading. DeLee states that external measurements are unreliable indices of the size of the pelvic cavity. He also states that years of practice are necessary to master internal pelvimetry. The latter also involves vaginal examination and is not advisable at term, if there is any question of delivery by Cæsarean section. Measurements, however, should be made if there is opportunity and the information utilized, but with considerable mental reservation.

X-ray examination will give very definite information, and if carefully done will detect the common variations in the shape and size of the pelvis, deformities, spurs, spondylolithesis, etc. An unfortunate experience of my own will illustrate the value of routine X-ray examination. The patient was a primipara of 25, in good health, with normal external measurements and an apparently small baby. Intervention became necessary, and only with a hand in the vagina under an anesthetic was the abnormal condition discovered, a heavy bony exostosis near the lumbo-sacral articulation. It was then too late to do anything but deliver from below.

Craniotomy was discussed and rejected in favor of forceps in an attempt to get a live baby. The result was a living baby with a severe intracranial damage which will be permanent. X-ray examination would have revealed the deformity and have saved the situation.

X-ray examination will also show the shape and size of the pelvic inlet. A word is needed about the interpretation of films. Unless a seven-foot distance from tube to film is used, distortion is present and must be calculated. Since the pelvic inlet is placed at an angle of forty to one hundred degrees with the vertical, its antero-posterior diameter will be foreshortened on the film, and since every part is at some distance from the film, its transverse diameter will be exaggerated. These distances may be measured exactly by Thoms' method or by calculation. With the Thoms method a film is taken, the patient is removed, a perforated lead plate is placed in the position formerly occupied by the pelvic inlet. A flash exposure is made. The film allows the diameters to be read by counting dots. The procedure is not difficult and the apparatus I use is home-made. The antero-posterior diameter is easiest measured by taking a lateral film, measuring the distance from the symphysis to the film, and making a simple calculation. The radiologist can easily make these calculations and give the exact diameters of the pelvic inlet. Thoms' method may be used at term, but it gives a plainer result if used before the amniotic fluid has greatly accumulated. Its density does not seriously interfere with the reading, but does give a disconcerting haziness to the film.

On the other hand, any information about the baby must be secured at term or even after labor has begun. At this time the head has reached its full size and may be measured. However, the actual size of the head is not the important thing. The size of the head as compared with that of the pelvic inlet is vitally important. The antero-

posterior film will show this relation. Distortion need not be taken into account in making the comparison when the head is at the inlet, since both objects lie in approximately the same plane. When the head is floating or overriding very markedly measurements should be made. This is the important observation, *i. e.*, the relative size of the head and the pelvis.

X-ray films do not show the mother's soft parts nor those of the baby, nor is allowance made for molding. However, these about offset each other, so that if there is not the normal relation of the transverse pelvic diameter to the occipito-frontal diameter, excessive molding or failure to deliver will follow. This normal difference is two centimeters, *i. e.*, the pelvic diameter thirteen centimeters and the occipito-frontal eleven centimeters. When the pelvis is of normal shape other diameters of the head need not be taken into consideration, since it has been shown that unmolded heads show nearly a constant ratio between the occipito-frontal and bi-parietal diameters. In flat and contracted pelvis an allowance of more than two centimeters must be made.

Another case of my own illustrates the value of this information. Mrs. D., a primipara, had been examined in another city and told that she was too small to have a living baby except by Cæsarean. From ordinary examination that seemed quite reasonable. X-ray examination revealed the following. No bony deformities were present. The pelvis was of normal shape. Exact measurements were, transverse diameter eleven and one-half centimeters, antero-posterior diameter nine and one-half centimeters. These are both rather below normal and decision was reserved. At term another X-ray was taken. The presentation was a vertex, the position occiput left anterior and the occipito-frontal diameter about two centimeters less than the transverse pelvic diameter. She was allowed to go into labor and was finally delivered very easily with forceps, with no injury to the baby and very little

to the mother. The decision in this case was based on the X-ray findings and was justified by the result.

The ideal schedule for X-ray examination in the ordinary case is, 1, search for bony deformities, and determination of the shape and exact size of the inlet before the third trimester, and 2, examination at term or early in labor to determine presentation, position and the relative size of the baby's head and the pelvis.

SUMMARY

X-ray examination is a valuable source of information in

1. Diagnosis of pregnancy.
2. Diagnosis of superfetation.
3. Diagnosis of skeletal defects and monstrosities.
4. Diagnosis of fetal death.
5. Diagnosis of normality before Cæsa-rean section.
6. Diagnosis of maternal abnormalities, such as exostoses, spondylolisthesis, etc.

7. Diagnosis of shape and size of the pelvic inlet.

8. Diagnosis of fetal presentation and position.

9. Diagnosis of relative size of the fetal head and maternal pelvis.

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**The Anemias: Their Diagnosis and Treatment*

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PART I

The purpose of this paper is to summarize the diagnosis and treatment of the anemias in the light of modern research. Before discussing the individual anemias, it may be well to review briefly the salient features of erythrogenesis. The various phases involved in the maturation of the red blood cells in the bone marrow are entirely intravascular. The capillaries of the bone marrow not only serve to maintain the circulation, but they have, in addition, a dual function of forming and destroying red blood cells. The endothelial cells of the sinuses in the bone marrow are phagocytic like those of the liver and spleen. Connecting the

sinuses are the intersinusoidal capillaries in which the red cells are formed from the endothelium. The successive stages in the development of the red cells, as described by Naegeli¹ and Piney², may be presented in the following manner: Endothelial cell, hemoblast, megaloblast, normoblast, erythrocyte. The *hemoblast* is the earliest red blood cell. It has an irregular cell body, 14 to 15 micra in diameter, with a large vesicular nucleus poor in chromatin arranged in loose skeins. The cytoplasm stains dark blue—darker than the nucleus. It is never found in the circulating blood. The *megaloblast* is the next descendant. It is smaller than the

*Clinical lecture delivered in the Graduate Course at the Rumford Community Hospital.

hemoblast, round, and has a large vesicular nucleus containing loose skeins of chromatin. The cytoplasm appears bluish, but lighter than in the hemoblast. The *normoblast* is about the size of a normal red blood cell. The cytoplasm may be the color of a normal red cell or faintly bluish. It contains a small intensely staining, purplish, pyknotic nucleus. The *erythrocyte* is the normal red blood cell.

The mature red blood cell is disc or cup-shaped and when stained the central part appears lighter because it is thinner. The substance of the cell is viscid or semi-solid, containing hemoglobin. The erythrocytes in health maintain a very constant size, the average diameter being 7.2 to 7.4 micra. In pernicious anemia the mean diameter of the red cells is increased; in chronic hemorrhage and in hypochromic anemia the mean diameter of the red cells is diminished. The average number of red cells per c. mm. normally is 5 million for men, 4.5 million for women. The normal hemoglobin content is about 13% to 14% of the weight of the blood. Dare estimates 13.7 grams of hemoglobin per 100 c.c. of blood; Haldane, 13.8; Tallquist, 15.8; Sahli, 17.2.

There is normally in the circulating blood about 1% of immature red blood cells or reticulocytes which represent the transitional stage between the normoblast and the erythrocyte. The reticulocytes are so named because vital staining, as cresyl blue, renders visible in them a network or reticulum which is really a precipitate of remnants of the basophile cytoplasm of the immature cell. In the blood stream reticulocytes ripen into adult corpuscles, the process taking a few hours to several days. When the delivery of red cells into the circulation is increased, as happens after considerable hemorrhage or in the regenerative phase of anemia, the percentage of reticulocytes rises. Conversely, when the delivery of red cells into the circulation is decreased, the number of reticulocytes falls. Enumeration of the reticulocytes is, therefore, a valuable method

for determining the rate of blood formation. When blood formation is excessively active, the more immature cells, normoblasts and megaloblasts, enter the circulation.

Anemia may be defined as a reduction in the amount of the circulating oxygen-carrying constituent of the blood, namely, hemoglobin. A reduction in the circulating hemoglobin is, as a rule, associated with a diminution in the number of the red cells.

CLASSIFICATION

The entire classification of the anemias is now in a state of confusion. Pernicious anemia has no longer its pernicious outlook; we see no more of the "green sickness," as chlorosis was called. It would be advisable to classify the anemias on purely etiologic grounds, but this ideal is yet to be attained. At the present time the anemias are usually classified according to the method of production.

1. Anemias due to blood loss:
 - (a) Acute.
 - (b) Chronic.
2. Anemias due to defective blood formation:
 - (a) Chlorosis.
 - (b) Myelophthisic anemia.
 - (c) Anemia due to nephritis, lead poisoning, etc.
 - (d) Simple chronic anemia (nutritional, glandular).
 - (e) Aplastic anemia.
 - (f) Primary hypochromic anemia.
3. Anemias due to increased blood destruction:
 - (a) Pernicious anemia.
 - (b) Acute hemolytic anemia.
 - (c) Chronic hemolytic anemia.
 - (d) Anemia due to infections.
 - (e) Anemia of pregnancy.
 - (f) Sick-cell anemia.
 - (g) Anemias associated with splenomegaly, as Banti's disease, Gaucher's disease.

DISCUSSION OF THE INDIVIDUAL ANEMIAS ANEMIAS DUE TO BLOOD LOSS

Anemia Due to Acute Blood Loss:

If one-third of the total amount of blood is suddenly removed from the circulation, death usually follows, provided the blood loss is not immediately replaced. Up to two-thirds of the original blood volume may be slowly (over twenty-four hours) removed without death following. Ordinarily a reduction in the hemoglobin to much below a quarter of the normal total amount is incompatible with life. In case the loss of blood is less than the lethal quantity, the following developments ensue: The examination of the blood immediately after a sudden hemorrhage shows normal readings of hemoglobin and of all the formed elements of the blood. Within a few hours there occurs an active polynuclear leucocytosis, averaging perhaps 20,000 per c. mm., although white counts as high as 40,000 have been noted (Naegeli¹). The next histologic variation in the blood is usually an increase in the platelets, which begins to be manifested during the first twenty-four hours and reaches a maximum in a few days. The young red cells are slower in appearance, especially the reticulated cells, which rise as high as 10% to 12% within forty-eight hours. The leucocytosis, the increase in platelets and in reticulocytes depend upon a prompt response of a normally functioning bone marrow. Normoblasts and other immature elements may also appear in the circulating blood. There is some evidence that there are reservoirs of red corpuscles which may become rapidly available, but the great bulk of red cells which replace those lost are newly-produced cells. Within a few days the activity of the bone marrow begins to subside. The restoration of the red cells is more rapid than that of hemoglobin, hence achromia and a low color index are features during convalescence. For a few hours after an acute hemorrhage, as noted above, the hemoglobin and the red cell count are the same as before the hemor-

rhage. At the end of this time the blood volume begins to be actively restored, with consequent dilution of the hemoglobin and the red corpuscles. The initial dilution comes from the fluid reserve of the tissues; the subsequent dilution depends on the administration of an adequate amount of fluid.

Symptoms. In these acute anemias one notes pallor, rapid, feeble pulse, rapid, shallow breathing, restlessness, sweating, low blood pressure, and at times delirium. These symptoms are primarily not due to oxygen want, but to loss of blood volume. The picture of anemia is often complicated by the symptoms of the causative condition and also by those of shock. It is obvious that a falling hemoglobin and red blood cell count after acute blood loss is not an indication of a persisting hemorrhage. The systolic blood pressure is perhaps the best single indicator of the condition of the patient.

Treatment. The immediate treatment is directed toward restoring the blood volume. This may be done by blood transfusion or by the intravenous administration of physiologic saline. A 6% solution of gum-acacia was used during the war. This has the advantage of remaining in the circulation. However, at times it is toxic and for this reason is not used much. If no more than 1,000 c. c. has been lost, and the systolic blood pressure is 90 or over, there is no indication for either transfusion or infusion.

A patient after severe loss of blood should be kept quiet in bed, usually with the aid of morphine. Warmth is a second essential in treatment. Fluids should be given freely—by the mouth if possible, otherwise rectally, subcutaneously, or intravenously. When the patient is out of danger general hygienic measures suffice. Repeated blood transfusions are contraindicated as they may depress the bone marrow. Iron is of value during convalescence.

Anemia Due to Chronic Blood Loss:

This type of anemia may be caused by such conditions as bleeding hemorrhoids, bleeding peptic ulcers, hepatic cirrhosis, etc.

The clinical picture is that of a long-standing anemia, and the longer this lasts, the less is there evidence of active bone marrow regeneration. In other words, there is less tendency to leucocytosis, to reticulocytosis, and to increase in platelets.

Treatment. The treatment should be directed toward removing the cause. If the hemoglobin is 30% or less, transfusion of blood is indicated. General hygienic measures should be employed. Iron in large doses is of value in bringing about increased hemoglobin regeneration.

ANEMIAS DUE TO DEFECTIVE BLOOD FORMATION

Chlorosis:

This anemia was certainly common several generations ago and is rarely, if ever, seen to-day. The etiology is unknown. It apparently occurs exclusively in young women. The symptoms are those of anemia. The complexion often shows a curious yellow-green tinge, which has given the disease its name, the green sickness. The hemoglobin is markedly reduced, while the number of red cells remains fairly high and may even reach above normal. In stained preparations the red cells appear markedly achromic, often being mere rings. There is no reticulocytosis or leucocytosis; the platelets tend to be increased. Iron in the form of Bland's pills is specific for this condition.

Myelophthisic Anemia:

In this type of anemia the hemopoietic areas in the bone marrow are mechanically deranged by tumors, primary or metastatic. The crowding out of the erythrogenic areas occurs most typically in leukemia. The symptoms and blood picture will depend on the causative condition. The treatment is directed toward the primary disease.

Anemias Due to Nephritis, Lead Poisoning, etc.:

This group of anemias is associated with definite underlying conditions. In some, as in nephritic anemia, the mechanism is ill understood. The treatment is primarily directed toward the cause.

Simple Chronic Anemia:

The etiology of this group of anemias is some defect in the patient's diet or some dysfunction of the endocrine glands. Iron deficiency is the causative factor in some cases; in others, the anemia is due to vitamin deficiency. Thus the anemia of scurvy is effectively relieved when a diet rich in vitamin C is administered; tropical megalocytic anemia responds satisfactorily to a diet rich in vitamin B. Derangement in the function of the endocrine glands at times produces an anemia; this is characteristically seen in the anemia associated with myxœdema, which disappears under thyroid therapy.

Most infantile anemias belong to this group (Parsons³). Artificially-fed babies frequently exhibit this type of anemia, which is probably due to iron deficiency, for the administration of iron and ammonium citrate in doses of 4.5 to 9 grains daily prevents it. It is probable that the infant is born with a scanty store of iron which is used up fairly rapidly and not renewed readily. Here also belong the constitutional nutritional anemias of infancy and childhood, which are usually apparent in early infancy and get more severe as the child grows older. Not much benefit is obtained by a varied diet. Usually, however, recovery does occur at the age of two to three years if those affected do not die of the anemia or of some intercurrent infection to which they are prone. These anemias usually occur in premature infants, in twins, and in the first-born. The anemia is usually of the chlorotic type. The blood smear may show nucleated red cells and myelocytes; the spleen is often enlarged. No dramatic effect is produced by any form of treatment, but under careful general hygienic conditions spontaneous recovery occurs after the second year. The cause of the anemia is probably some error in metabolism due to the lack of a substance which the infant cannot synthesize from his food.

Aplastic Anemia:

Benzol, radium, roentgen rays, infections such as typhoid fever and sepsis may result

in an aplasia of the bone marrow, with the production of an aplastic anemia of the secondary type. There is, in addition, an idiopathic type of splastic anemia. Here there is an atrophy of the hemopoietic areas in the bone marrow which are replaced by fat and connective tissue. It occurs usually in young persons between fifteen and thirty years of age. Progressive pallor and weakness are features. The blood shows no evidence of regeneration on the part of the bone marrow in the face of the progressive reduction of hemoglobin, erythrocytes, leucocytes, and platelets. Despite the presence of anemia, the red cells are relatively normal in appearance and young forms are rare. As the condition progresses complications due to decreased number of platelets are seen, as a prolonged bleeding time with a tendency to purpura and hemorrhages from mucous membranes.

Treatment. The treatment of idiopathic aplastic anemia seems futile, as the condition is probably always fatal. Brugsch⁴ recently reported a case who appeared to be considerably improved at the end of eleven months following fourteen blood transfusions and splenectomy. In the secondary types the treatment is directed toward the causal conditions.

Primary Hypochromic Anemia:

This condition, mentioned by Einhorn⁵ in 1903, was first described in detail by Faber⁶ in 1913, and has only of late attracted widespread attention. Recent studies by Witts⁷, Waugh⁸, Dameshek⁹, Bode and Krumm¹⁰ mark this disease as a definite clinical entity. The clinical picture in these patients resembles in many respects pernicious anemia, but the blood picture is that of a secondary anemia. The most constant finding is achlorhydria; occasionally hypochlorhydria is encountered. According to Lerman¹¹ and his associates, the degree of anemia tends to vary directly with the level of gastric acidity. The etiology being unknown, Dameshek⁹ proposes for this condi-

tion the term "primary hypochromic anemia" (erythro-normoblastic anemia).

This anemia usually occurs in women between thirty-five and forty-five years of age, that is, shortly before the onset of menopause. It is subject to remissions and relapses, and is at times associated with a sore tongue and paresthesias. Witts⁷ in a study of fifty cases, noted the following symptoms and their incidence:

Anemia,	39 cases
Oedema,	6 "
Angina,	2 "
Dyspepsia,	15 "
Diarrhea,	11 "
Sore tongue,	10 "
Dysphagia,	6 "
Achroparesthesia,	3 "
Glossitis,	25 "
Splenomegaly,	16 "
Koilonychia (spoon nails),	4 "
Amenorrhea,	5 "
Menorrhagia,	7 "

The blood shows a relatively high erythrocyte count and a low hemoglobin percentage, yielding a color index of less than unity. The red cells are hypochromic. Changes in the size and shape of the red cells are common and at times striking. The average red blood cell diameter is decreased, being 5.8 to 6.2 micra. Leucopenia is the rule. The platelets are reduced in number. During remissions there is a rise in the reticulocytes, reaching 9% to 10% at times, but not as high as in pernicious anemia.

Treatment. Iron is a specific for this condition. Mitchell and Vaughn¹² group the iron salts on the basis of the rapidity and height of hemoglobin response as follows:

Good. Ferric Acetate.

Ferric Albuminate.

Ferric Chloride.

Ferric Citrate.

Fair. Peptonized Ferric Oxide.

Saccharated Ferric Oxide.

Saccharated Ferrous Carbonate.

Ferrous Iodide.

Poor. Ferric Oxide.

 Ferrous Carbonate (Blaud's Pills).

 Ferric Potassium Tartarate.

 Reduced Iron.

 Ferrous Sulphate.

As a matter of fact, reduced iron, which is classed here as a poor hemoglobin regenerator, is remarkably effective in the treatment of primary hypochromic anemia, if given in large doses, 3 to 9 grams daily. This has been demonstrated by many investigators (Naegeli,¹ Witts,⁷ Waugh,⁸ Dameshek,⁹ Schulten³).

It may be well at this point to mention briefly the value of copper and liver in the treatment of secondary anemia. The use of iron and copper in combination in the treatment of secondary anemias has recently attracted considerable attention. Since copper is widely distributed in the animal body and in foods, and is definitely a constituent of liver, it must be regarded as an element of importance in metabolism. Steenbock¹⁴ and his associates showed that iron alone was inadequate in bringing about hemoglobin regeneration in nutritional anemias, but this took place rapidly when small amounts of copper were added. It probably acts as a catalyst. Lewis,¹⁵ in his studies of nutritional and secondary anemias in children, concludes that iron and copper in combination were more effective than iron given alone. He administered saccharated ferrous carbonate 15 to 60 grains daily and copper sulphate, 0.5% solution, 1 to 2 teaspoonfuls three times daily. Mills¹⁶ is of the opinion that the feeding of copper and iron combined in the treatment of idiopathic hypochromic anemia in adults at times has an unusually favorable influence. He used capsules of ferrous carbonate 0.2 gm., copper sulphate 1.5 mg., and phenolphthalein 0.017 gm.; he administered one capsule t. i. d. Inorganic iron in combination with copper has been found to be more effective than organic iron with copper (Elvehjem¹⁷).

A combination of iron and liver in the treatment of secondary anemia is at times more effective than when iron alone is given

(Kiefer¹⁸ and Yang¹⁹). Liver alone, as a rule, is of little value in the treatment of secondary anemias.

It is not possible to predict in every case which form of treatment would be most beneficial. If complete recovery is not obtained in patients following the use of iron, then liver or copper should be added.

Hemolytic Anemias:

Only brief reference will be made here to the hemolytic anemias. The acute hemolytic anemias may be caused by chemical poisons, such as coal-tar derivatives, potassium chlorate, and trinitrotoluene. The anemias which develop during the course of acute infectious diseases are hemolytic. Hemolytic jaundice and the so-called splenic anemias (Banti's disease, Gaucher's disease) belong here.

The severe anemia that sometimes occurs during pregnancy and puerperium, without gross hemorrhage or sepsis, is also a hemolytic anemia. Though usually acute, it may be prolonged through the duration of pregnancy. The etiology is unknown. The symptoms consist of pallor, weakness, dyspnea, oedema, causeless hemorrhages, uncontrollable vomiting or diarrhea. The spleen and liver may be palpable. The temperature is usually elevated. The blood picture may resemble that seen in secondary or pernicious anemia, and rarely in aplastic anemia (Larrabee²⁰). Blood transfusion is the most effective form of treatment for this anemia. The administration of liver, liver and iron, and at times splenectomy are occasionally beneficial.

Sickle-cell Anemia:

This disease was first described by Herrick²¹ in 1910. It is considered in greater detail in more recent publications by Sydenstricker²², and Yater and Molari²³. Sickle-cell anemia is a familial and hereditary disease probably confined to the Negro race. The disease is present and recognizable at birth. About 7% of the Negro race show the sickle-cell trait, *i. e.*, the blood of these patients, after anærobic incubation, exhibits

the phenomenon of drepanocytosis or sickling. Relatively few persons possessing the sickle-cell trait develop the active phase, when drepanocytosis takes place in the circulating blood with the production of a severe anemia. The number of sickle-cells in the blood *in vivo* may be varied by the change in the partial O_2 pressure. The reaction is apparently reversible, drepanocytosis taking place when the O_2 pressure falls below 45 mm. hg.

It is obvious that sickle-cell anemia exhibits two phases, namely, a latent and an active. In the latent stage the symptoms are few, the diagnosis usually being made by special blood examination. The symptoms in this stage consist of occasional muscle pains, attacks of epigastric and left hypochondriac pain, sometimes associated with nausea and vomiting. There is general glandular enlargement, slight enlargement of the liver and sometimes of the spleen, and some jaundice. Leg ulcers are frequent. The blood may reveal no anemia. Blood smears, however, show moderate variation in the size and shape of the red cells, and

occasional immature cells. Careful search shows phagocytosis of erythrocytes by large mononuclear cells. Sealed fresh preparations after eighteen to twenty-four hours show the development of extraordinary crescentic and stellate forms which characterize the disease. The symptomatology is more constant in the active stage, which shows evidence of marked red cell destruction. There is dyspnea, palpitation, and weakness due to the anemia. Muscle and joint pains are frequent. There are attacks of nausea and vomiting, associated with epigastric and left hypochondriac pains. There is a low-grade fever, frequent night sweats, and generalized glandular enlargement. The liver is constantly enlarged, the spleen infrequently. The blood shows moderate anemia with leucocytosis. The sickle-cells are present in smears and in fresh preparations. The reticulocytes are increased in number. Phagocytosis is always demonstrable.

The treatment of sickle-cell anemia in general is unsatisfactory. When the anemia is very severe, blood transfusion is of benefit.

NOTE.—This article concluded in the December issue, with a discussion of Pernicious Anemia.

Nursing More than Medicine's Left-overs

"Nursing is infinitely more than medicine's left-overs and the following out of orders for treatment," Mary M. Roberts, R. N., editor of the *American Journal of Nursing*, told the delegates to the annual convention of the American College of Surgeons in St. Louis, October 17th.

"Under medical direction, nursing is the responsibility for the environment of the patient, for creating about him a pool of peace in which the medical treatment can best function, as well as for the manual arts of nursing," Miss Roberts declared.

No longer under compulsion to produce numbers of nurses, attention can now be turned toward the quality of nurses and of

nursing care, she told the surgeons. A new system that will free hospitals, which are service organizations, of the financial responsibility for conducting an educational institution—the school of nursing—is needed. The old system of nursing training is outworn. Society is demanding better and more carefully selected and prepared nurses, Miss Roberts believes.

Too much of the present overproduction is of poorly prepared nurses, said the nurse-editor. This, she thinks, is a grave disaster to nursing. Moreover, it should cause anxiety to all employers of nurses, since no effective means of protecting the patient from these poorly qualified workers has been

set up. The requirements for nurse registration in some states are so low that the R. N. does not assure a very high degree of safety for patients, and there are no other safeguards.

The onus for the production of poorly prepared nurses rests on nurses, doctors, and hospital executives. All three groups have had a hand in it, according to Miss Roberts. It can be righted only with the active coöperation of all three, and with the aid of the public, upon whom the responsibility for the education of public servants should rest.

Steps that the nursing profession is taking to change the system, as enumerated by the editor of the official nursing publication, include the following: (1) Taking the lessons of the Grading Committee to heart; (2) watching the studies of the Committee on the Costs of Medical Care, and (3) assisting with cost studies, in order that nurse training costs may be justly allocated to service or to education, as the case may be, with a view to securing funds for each.

Organized nursing is most humbly admitting, its spokesman said, that the job of nursing this country, as it should and some day will be nursed, is really just begun, and that it cannot go forward without the counsel of those with whom the nurses daily serve in the care of individual patients.

Better Night Nursing

A new deal for the hospital patient at night is asked by Blanche Pfefferkorn, R. N., after a study of the night nursing service in seven hospitals on the eastern seaboard. Miss Pfefferkorn's analysis of the nursing on acute medical and surgical wards in these hospitals forms the basis of a striking article in the *American Journal of Nursing* for November.

"While from the standpoint of the student there is much that is difficult to defend in the present system of night nursing, from the standpoint of the patient there is more

that is indefensible," states Miss Pfefferkorn, who is director of studies of the National League of Nursing Education. "The wise innovations introduced in the last two decades into the nursing program by day—graduate head nurses, an increased number of bedside graduate nurses, more and better supervision, shorter hours, and supplementary ward workers—have scarcely touched the night nursing program."

To get the data presented in her article, Miss Pfefferkorn obtained permission from the hospitals to spend twelve consecutive hours from 7.00 P. M. to 7.00 A. M. observing nursing at night. The information thus obtained was treated as strictly confidential. Once the material was gathered it was indexed under a code. The interest of the National League of Nursing Education in making this study, according to its statistical worker, is not in the nursing in any particular hospital, but in nursing at large. It is believed that the nursing conditions found in the seven hospitals visited are not peculiar to these institutions, but that similar conditions exist in many other hospitals.

In six of the seven institutions visited, the acute medical and surgical wards studied were staffed with student nurses. In the other, a graduate and a student constituted the bedside staff throughout the night. The average number of minutes of care per patient in these hospitals ranged all the way from 21.8 to 144 minutes.

Not only was there a wide range in the quantity of service, but there was an equally wide range in the quality of service, Miss Pfefferkorn found. In three of the hospitals visited, the night nursing on the wards in which observations were made was entirely delegated to students who had been in school less than a year. In these three hospitals, ten or twelve hour duty was still in effect. Inadequate preparation and long hours of service both militated seriously against the safe care of the patient, Miss Pfefferkorn contends. Try as she will, the director of nursing cannot regulate satisfactorily the staffing at night unless the hos-

pital provides a reasonable number of graduate nurses for bedside service.

Not only was the nursing of patients delegated to an inadequate and immature staff, but the study indicated that night supervisors are not selected upon the same high standards as are the day supervising staff. Two instances of excellent night supervision were cited. Certain other improvements were noted, such as the postponement of the early morning work until 5.00 or 6.00 A. M., and the serving of breakfasts by the day staff instead of the hurried unsatisfactory serving by the night nurse.

If patients are to have proper care at night, four conditions must obtain, Miss Pfefferkorn concludes. These are as follows:

1. Enough nursing time must be provided.
2. Night nurses must be adequately prepared. This provision includes a liberal number of graduate bedside nurses for the night.
3. Enough supervision must be provided, both in quality and in quantity.
4. A reasonable hour schedule must be put into effect.

Necrology

Frederick Lincoln Chenery, Monmouth, 1863-1932

Dr. Chenery was an active practitioner of medicine for many years until, in 1930, he suffered the loss of a leg as a result of arteriosclerotic gangrene, followed by coronary occlusion. The son of Michael P. and Jane Norcross Chenery, he was born in Livermore, April 23, 1863, well educated at Kent's Hill famous seminary, and obtained his medical degree at the University of New York Medical School in 1886. Directly afterward, he located for practice in Wayne, and remained there until, in 1921, he removed to Monmouth, where he ended his career. He was prominent in medical, church and social affairs, and very much de-

voted to fine horses as a means of carrying on, to his perfect satisfaction and that of his patients, his widespread country practice. Everywhere he was known as hospitable, cheerful and sympathetic, and the same spirit made his home a center for young people and all who were interested in the finer things of life. His one great regret in his medical practice was his compulsion to abandon horses for the hustling motor car of the day. He was a physician of rare skill and good humor, loved good stories, told them with geniality and aptness to the point, and his record as a skillful country doctor and kindly physician will long follow his departure.

He belonged to many social, friendly and medical societies, and was fond of being the choir leader in the church at Wayne for many years. He married, first, Miss Lizzie Lawrence, of Fairfield, and after her death, Miss Alice P. Hinckley, of Lewiston, who, with a son, Dr. Frederick Lincoln Chenery, Jr., of Monmouth, now survive and cherish his honored memory.

J. A. S.

John George Gehring, Bethel, 1857-1932

Way back in 1885, Dr. Frederick Henry Gerrish read before the Clinical Club of Portland a paper on "Hypnotic Suggestion," an idea for neurotic patients just beginning to penetrate into this country from abroad. This paper was read in the house of the late Dr. Charles A. Ring and was well received by all present except the eldest member, who waited until the others had expressed their opinions and then said, "This club was formed for the discussion of papers on medicine and surgery, but as this new idea of cure by suggestion is neither the one nor the other, I move that all reference concerning it on the Secretary's report shall be expunged." Later on, in 1892, Dr. Gerrish read another paper before the Maine Medical Association, with many additional cases, and it was honored with a long discussion,

and the member of the Clinical Club who had originally objected to the topic praised the successes which it had gained at the



hands of Dr. Gerrish. One of our members, Dr. J. G. Gehring, of Bethel, about this time came under the care of Dr. Gerrish, and was greatly relieved of serious neurotic conditions. After a while he read a paper on the "Subconscious Mind," which attracted much attention at our meeting in 1900. Relieved of his neuroses, Dr. Gehring, of Bethel, the writer of this paper, has lately died, and it is now our kindly duty to say something concerning the very remarkable career of the man known to many, many patients over a world-wide circuit as "the wizard of the Androscoggin." Born in Cleveland, Ohio, July 4, 1857, the son of Karl August and Wilhelmina Vetter Gehring, John George, the son, was well educated and obtained his medical degree at the Western Reserve Medical College in 1885, was hospital interne for a while, and started to practice in Cleveland. But he was of a wandering disposition, already suffering from some neurosis which nobody understood, so he was in 1887 sent South, where he met, amongst others, Mr. and Mrs. Farnsworth,

of Bethel, people of wealth, who took to the young man a lasting fancy, and it was at their suggestion that Gehring went to Bethel for his health. Being near Portland, he heard of Dr. Gerrish and his hypnotic cures, and putting himself under their influence he was soon much relieved. At the suggestion of the Farnsworths, Mrs. Farnsworth being, by the way, a daughter of the late Dr. Nathaniel True, of Bethel, Dr. Gehring worked away on his little farm, took up suggestion and hypnotism, and soon surrounded himself with an influential circle of literary and monetary admirers, who flocked to him from everywhere. Dr. Gehring married Mrs. Farnsworth when she became a widow, and to her is largely due the kindness of the fortunes poured upon him. It is difficult to obtain any exact account of the practice at Dr. Gehring's home. It was, however, generally known that first in the treatment of admiring patients was the suggestion that it could be cured—the nerves had worked at the expense of the brain, and now the muscles must work. So every morning came the swim in the pool, then the breakfast, and then work—not play-work, but real work with the hoe, the axe, the shovel, the spade and the saw, sawing and splitting wood, weeding, mowing grass, running the mowing machine, and in winter the book binding, the carpentering and innumerable sorts of real labor—then dress for dinner, and after that music, cards, singing, reading light literature, and listening to pleasant talk. Cures of course followed, and fame and riches were the reward of Dr. Gehring of Bethel.

Dr. Gehring was of a very happy disposition of mind, and toward the end of his life unusually so. He died suddenly at dinner August 31st, and has left a vacancy that will not easily be filled in the large concourse of people who have infinite belief in the virtues of hypnotic suggestion and work.

He was a force in the village, kept it beautiful, worked to improve the village common and to sustain its former verdant beauty. He was interested in the Boy

Scouts, helped people with their shrubs, gardens, bulbs and plants, and was an active devotee of entomology, namely, what other people call common bugs and beetles. He was a man who attracted many people, young and old, by his wide knowledge of nature.

He wrote a book on the "Variant," and it must have reminded him of his own career, for he was different from all the men about him.

He will long be recalled for his extraordinary career in Bethel, whilst the metropolis of New York will exhibit to visiting guests a handsome ward dedicated to his name, fame and memory in the New York Neurotic Hospital.

J. A. S.

***Henri Lambert,
Brunswick, 1881-1931***



We regret to insert so tardily after his death, in December last, a kindly note of sympathy for our colleague from Brunswick, but his death occurred without any news-

paper notice reaching us, and this shall account for an unintentional delay.

Dr. Lambert was of French extraction on both sides, his father being Gilbert Lambert, and his mother Delphine Trudel, and he was born in Calumet, Michigan, amongst the copper mines of that famous country, August 28, 1881. As his parents removed into Canada not long after his birth, he was educated in the Dominion, at St. Theresa Academy, and medically educated and graduated with honor at La Salle University, in Montreal, in 1906. Directly after graduation, he was appointed as interne in the celebrated Notre Dame Hospital in Montreal, where he served faithfully and successfully during his term of surgical and medical service. This position he held until 1909, when he removed to Brunswick and soon obtained his share of practice amidst the French Canadian people and natives alike. He was well thought of by clients and citizens, and has left a most excellent medical record.

He married Miss Eveline DeRome, of Brunswick, and is survived by her with deep regret.

J. A. S.

***Harvey Howard, Jr.,
Elmira, New York***

We regret to announce the sudden death, at an early age, of Dr. Harvey Howard, Jr., son of our fellow member, Dr. Howard, of Freeport, after an operation.

Born in Freeport in 1903, and delicate, at the age of six years he was taken to the West, graduated A. B. from Michigan University and M. D. from McGill. A most promising member of our profession, a charming young man, he served with high praise as interne to the Arnot Ogden Hospital, of Elmira, where he was an inspiration to his medical comrades and patients alike. Our deep sympathy goes out to his parents, and to a brother practicing in Los Angeles.

County News and Notes

Androscoggin

Dr. William Fahey, of Lewiston, was recently admitted to the American College of Surgeons.

Dr. Julius Gottlieb, of Lewiston, has received notification of his election to the American College of Physicians.

The Third Post-Graduate Teaching Clinic of the year was held at the Central Maine General Hospital on Monday and Tuesday, November 21 and 22, by Dr. Henry Christian, Professor of Medicine, Harvard Medical School.

The program was as follows:

MONDAY, NOVEMBER 21

2.30 to 5.00 P. M. Ward Walks and Round Table Conference, with Dr. Christian.

8.00 P. M. Lecture, "Cardiac Disease and Its Treatment," Dr. Christian.

TUESDAY, NOVEMBER 22

9.00 A. M. to 12.00 M. Presentation of cases, with discussions led by Dr. Christian.

GRADUATE CLINIC COMMITTEE,

J. GOTTLIEB,

Secretary.

Aroostook

Drs. Oscar Norell, Caribou, and Eugene B. Griffiths, Presque Isle, were recently elected to membership in the Aroostook County Medical Association.

The Aroostook County Medical Society held its semi-annual meeting, November 15, 1932, at Caribou.

Speakers, Dr. George H. Coombs, Augusta, and Dr. B. F. Porter, Caribou, who spoke on subjects pertinent to public health.

The President, Dr. E. D. Merrill, Dover-Foxcroft, was present and addressed the meeting.

A. T. WHITNEY,

Secretary.

Cumberland

The regular monthly meeting of the Portland Medical Club was held on Tuesday evening, November 1st, at the Columbia Hotel.

The paper of the evening was by Dr. Oscar Johnson; the subject, "Lues." Discussion followed by Doctors Pudor, Foster and Haney.

E. S. HALL, M. D.,

Secretary.

Dr. Mortimer Warren has moved his private office and laboratories from 131 State Street to the new Pavilion, Maine General Hospital, 2 Arsenal Street. Telephone Forest-15.

Dr. Arch H. Morrell Named Diagnostic Laboratory Director

Augusta, November 18.—Employment by the State Health Department of Dr. Arch H. Morrell, of Portland, formerly of Gardiner, as director of the State Diagnostic Laboratory in Augusta, was confirmed by the Governor and Executive Council to-day.—*Press Herald*, November 19, 1932.

Oxford

At a regular meeting of the Oxford County Medical Association, held at Bethel Inn, Bethel, October 19, 1932, the following doctors were elected to membership: Dr. Alfred F. Demilia, Lovell; Dr. Harry MacKay Wilson, Bethel, and Dr. Benjamin I. Cassin, Andover.

Penobscot

The annual meeting of the Penobscot County Medical Society was held Monday, November 14, 1932, in conjunction with the fall clinic at the Eastern Maine General Hospital.

MONDAY, NOVEMBER 14, 1932

At E. M. G. Hospital

9.30 A. M. General Ward Rounds.

3.00 P. M. General Surgical and Medical Clinic.

8.00 P. M. Annual meeting of the Medical Society.

The following officers were elected:

President—James F. Cox, Bangor.

Vice-President—A. C. Strout, Dexter.

Secretary and Treasurer—Lester Adams, Bangor.

Dinner,

Speaker: Dr. George Blumer, Professor of Clinical Medicine, Yale University. Subject, "Granulopenia and Agranulosis."

TUESDAY, NOVEMBER 15, 1932

9.30 A. M. General Ward Rounds.

3.00 P. M. General Surgical and Medical Clinic.

7.00 P. M. Informal Dinner at the Penobscot Valley Country Club.

Speaker: Dr. Samuel Harvey, Professor of Surgery, Yale University. Subject, "The Process of Repair and Its Practical Significance."

H. C. SCRIBNER,

Secretary.

Members of the Maine Medical Association

ANDROSCOGGIN COUNTY

Andrews, S. L.,	Lewiston
Beliveau, R. A.,	Lewiston
Bernard, R. A.,	Lewiston
Bolster, W. W.,	Lewiston
Brien, Maurice,	Lewiston
Buker, E. B.,	Auburn
Busch, John J.,	Mechanic Falls
Call, E. V.,	Lewiston
Cartland, J. E.,	Auburn
Chaffers, W. H.,	Lewiston
Chenery, F. L., Jr.,	Monmouth
Cunningham, C. H.,	Auburn
Desaulniers, G. E.,	Lewiston
Desaulniers, Lucy O'C.,	Lewiston
Dionne, Maurice,	Brunswick
Dupras, J. E.,	Lewiston
Fahey, W. J.,	Lewiston
Garcelon, H. W.,	Auburn
Gauvreau, H. L.,	Lewiston
Gerrish, L. P.,	Lisbon Falls
Giguere, E. N.,	Lewiston
Goldman, Harold,	New Gloucester
Goldman, M. E.,	Lewiston
Goodwin, R. A.,	Auburn
Gottlieb, Julius,	Lewiston
Grant, Alton, Jr.,	Auburn
Green, M. S. F.,	Lewiston
Hanscom, O. E.,	Greene
Haskell, W. L.,	Lewiston
Hiebert, J. C.,	Lewiston
Higgins, E. C.,	Lewiston
Ladouceur, W. J.,	Lewiston
Leonard, Christina,	New York City
Langelier, E. H.,	Lewiston
Leathers, E.,	Auburn
Miller, H. R.,	Auburn
Mitchell, R. L.,	Lewiston
Murphy, D. Jerome,	Lewiston
O'Connell, G. B.,	Lewiston
Peaslee, C. C.,	Auburn
Pelletier, J. J.,	Lewiston
Peters, Anthony E.,	Lewiston
Pierce, E. F.,	Lewiston
Plummer, A. W.,	Lisbon Falls
Pratt, H. S.,	Livermore Falls
Rand, G. H.,	Livermore Falls
Randall, R. N.,	Lewiston
Renwick, W. J.,	Auburn
Roy, L. O.,	Lewiston
Russell, B. W.,	Lewiston
Russell, D. F. D.,	Leeds
Scannell, J. W.,	Lewiston
Schneider, George A.,	Lewiston
Sprague, O. A.,	Turner
Sprince, Henry,	Lewiston
Sweatt, Linwood,	New Gloucester
Tousignant, Camille,	Lewiston
Twaddle, G. W.,	Auburn
Wakefield, F. S.,	Lewiston
Webber, W. E.,	Lewiston
Williams, J. A.,	Mechanic Falls
Wiseman, R. J.,	Lewiston

HONORARY MEMBERS

Irish, H. L.,	Turner
Norton, C. E.,	Lewiston

AROOSTOOK COUNTY

Albert, J. L.,	St. Francis
Bates, E. C.,	Houlton

Bennett, F. E.,	Presque Isle
Blossom, F. O.,	Caribou
Boone, Storer W.,	Presque Isle
Brown, M. J.,	Mars Hill
Carter, L. F.,	Presque Isle
Chamberlain, W. G.,	Fort Fairfield
Curtis, A. K.,	Danforth
Damon, A. H.,	Limestone
Dickison, T. S.,	Houlton
Doble, E. H.,	Presque Isle
Dobson, H. L.,	Presque Isle
Donovan, J. A.,	Houlton
Ebbett, P. L. B.,	Houlton
Faucher, Francois J.,	Grand Isle
Gibson, W. B.,	Houlton
Graves, R. A.,	Presque Isle
Gregory, F. L.,	Caribou
Griffiths, Eugene B.,	Presque Isle
Hagerthy, A. B.,	Ashland
Hammond, H. H.,	Van Buren
Huggard, L. H.,	Limestone
Jackson, F. H.,	Houlton
Kallock, H. F.,	Fort Fairfield
Kimball, H. C.,	Fort Fairfield
Kirk, Wm. V.,	Eagle Lake
MacDougal, W. A.,	Westfield
Mitchell, F. W.,	Houlton
Norell, Oscar,	Caribou
Parent, J. Wilfred,	Van Buren
Potter, J. G.,	Houlton
Savage, R.,	Fort Kent
Sincock, W. E.,	Caribou
Small, H. E.,	Fort Fairfield
Somerville, W. S.,	Mars Hill
Sweat, Clyde I.,	Island Falls
Tarbell, F. W.,	Smyrna Mills
Upton, G. W.,	Sherman
Ward, P. M.,	Houlton
Whitney, Arthur Thomas,	Houlton

HONORARY MEMBERS

Kilburn, Frank,	Presque Isle
Upham, G. C.,	Biddeford
White, W. W.,	Houlton

CUMBERLAND COUNTY

Abbott, E. G.,	Portland
Abbott, E. S.,	Bridgton
Allen, G. A.,	Lovell
Allen, J. H.,	Portland
Anderson, W. D.,	Portland
Austin, L. K.,	Portland
Bates, G. F.,	Yarmouth
Beach, S. J.,	Portland
Beck, Henry W.,	Gray
Bickmore, H. V.,	Portland
Bishoffberger, J. M.,	Naples
Bishop, L. W.,	Portland
Black, R. P.,	Peaks Island
Blaisdell, E. R.,	Portland
Blake, J. P.,	Harrison
Bradford, W. H.,	Portland
Brock, H. H.,	Portland
Brown, F. I.,	South Portland
Brown, L. A.,	Portland
Brown, Stephen S.,	Portland
Burrage, T. J.,	Portland
Carmichael, F. E.,	Portland
Casey, Wm. L.,	Portland

Caswell, C. O.,	Portland	Lougee, A. J.,	Fryeburg
Center, E. A.,	Steep Falls	Love, Robert B.,	Gorham
Clark, R. H.,	Massillon, Ohio	McAdams, Wm. R.,	Portland
Clarke, C. L.,	Portland	MacVane, E. F.,	Portland
Cleveland, H. H.,	Portland	Mannix, D. H.,	Portland
Clough, D. J.,	Portland	Marshall, B. F.,	Westbrook
Cousins, W. L.,	Portland	Marshall, L. B.,	Portland
Cragin, C. L.,	Portland	McAleney, Jas. L.,	Portland
Cummings, E. S.,	Portland	McCrum, P. H.,	Portland
Cummings, G. O.,	Portland	McDonough, Edw. J.,	Portland
Curtis, H. L.,	Portland	Meisenbach, R. O.,	Portland
D'Arche, A. A.,	Westbrook	Melnick, Jacob,	Portland
Davis, H. E.,	Portland	Milliken, H. E.,	Portland
Davis, J. L.,	Portland	Milliken, J. S.,	Portland
Davis, P. W.,	Portland	Mitchell, Alfred, Jr.,	Portland
Derry, L. A.,	Portland	Moore, R. B.,	Portland
Dooley, F. M.,	Portland	Moran, William,	Portland
Dorsey, F. D.,	Portland	Morrell, Arch H.,	Portland
Douphinett, Otis J.,	Portland	Moulton, A. W.,	Portland
Drake, E. H.,	Portland	Moulton, Willis B.,	Portland
Drummond, J. B.,	Portland	Moulton, W. Bean,	Portland
Dyson, W. W.,	Portland	Mulford, Arnold E.,	Bridgehampton, N. Y.
Elliott, G. M.,	Brunswick	Needelman, W. R.,	Portland
Emery, H. S.,	Portland	Nichols, Estes,	Portland
Everett, H. J.,	Portland	O'Donnell, E. E.,	Portland
Fagone, Francis A.,	Portland	O'Neill, Jas. B.,	Portland
Ferguson, F. A.,	Portland	Oram, Julius C.,	South Portland
Ferren, F. L.,	Westbrook	O'Sullivan, T. J.,	Portland
Fickett, J. P.,	Naples	Parker, Chas. F.,	South Windham
Files, E. W.,	Portland	Parsons, Neil,	Damariscotta
Fisher, S. E.,	Portland	Patterson, H. J.,	Portland
Fogg, C. E.,	Portland	Peaslee, C. Capen, Jr.,	Portland
Folsom, E. B.,	Portland	Pepper, J. L.,	South Portland
Foss, C. W. P.,	Brunswick	Peters, Clinton N.,	Portland
Foster, B. B.,	Portland	Pingree, H. A.,	Portland
Foster, T. A.,	Portland	Pletts, Robert C.,	Brunswick
Freeman, W. E.,	Yarmouth	Poore, L. H.,	Crescent Lake
Gehring, E. W.,	Portland	Potter, J. L.,	Portland
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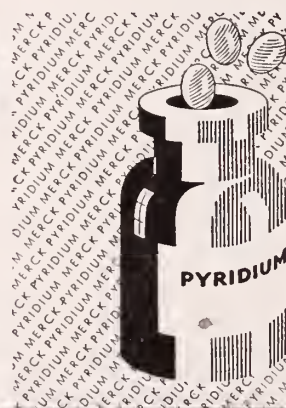
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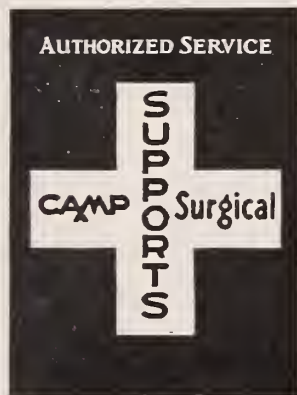
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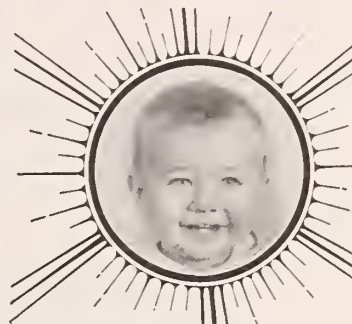
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Vol. XXIII

Portland, Maine, December, 1932

No. 12

Editorial

Committee on Medical Costs Recommend Revolutionary Remedies

The Committee on the Cost of Medical Care, after five years of most exhaustive and painstaking work, has at length filed its report, which, to say the least, leans toward state medicine and is decidedly revolutionary, recommending the extensive

SOCIALIZATION OF MEDICAL SERVICE

After long labor the committee has been brought to bed and delivered, among other things, of a Hydra, a monster which, if it does not die of malnutrition, it is to be hoped some modern Hercules will strangle in its cradle. Briefly, the majority report favors the establishment of

GROUP PRACTICE OF MEDICINE

with centers to provide for their communities complete medical service, financed by *group payments* through insurance, taxation, or both.

Such a plan means neither more nor less than increasing government supervision and public ownership of medical service, and could not be put in effect without the most liberal federal aid. There is nothing more false than the idea that government control and aid will solve all problems which per-

plex the people and end all difficulties. Under this plan the

ULTIMATE GOAL IS STATE MEDICINE

Medicine is only one of many things the people need. Why set apart medicine in this way? If we socialize medicine, why not food, rent, clothing, fuel? What is wrong with medical practice? It is evident that the world has been and still is economically sick, and it is time to face the fact that the inability of the average wage-earner to pay for necessary medical care, and of the average doctor to collect enough to assure a decent living, is part of a larger problem which will not be solved by any one group or by measures applied to the reorganization of the methods and practice of any one group. The solution of this particular problem, if there be a solution, depends directly on the return of society in general to economic stability and health.

Of course all good citizens should labor for this recovery. It is evident and needs no argument that the return to or maintenance of general economic health is not the peculiar problem of the physician; it is a matter of universal concern, a responsibility of all citizens in varying degree. It is equally true, upon analysis, that the responsibility of making adequate medical care

available to all at a cost within the reach of all is not, as some would have us think, the *peculiar* responsibility of the profession. It is a responsibility which it should share, to the best of its ability, with all good citizens.

The paramount, not to be disputed, responsibility of the profession is to make itself collectively and individually in scientific attainment, in methods, and in practice, in the highest degree deserving of the trust and patronage of all.

Men have always prized most those things for which they have had to strive, to work, to sacrifice—for the most part we do not greatly value what can be had without effort and without price. Medical service is a commodity upon which modern civilization necessarily has set a price, perhaps too dear a price. Nevertheless, medical service, to accomplish its best results, must be "prized"; if not "prized" its quality will suffer. However dispensed, it must be from sources which can be trusted. Let us strive to keep these sources trustworthy.

In material things the past and present prove that mass production too often means inferior quality. It is our conviction that a commodity such as medical service is no exception to this rule. We are certain that the quality of medical service would fast deteriorate under the plan recommended by this committee. The history of group practice coupled with group insurance under governmental supervision in other lands warrants this belief.

The investigations of the committee have shown conclusively that the high cost of medical care cannot be charged to excessive fees or large incomes of the practitioners of medicine. The profession might perhaps, with some justice, be blamed that they did not take a united stand in opposition to the orgy of hospital building which the last twenty years have witnessed, wherein the philanthropist, the industrialist, and the politician, unchecked, have erected palace after palace for the sick. Big business, politics, and philanthropy have come to have too large a voice in matters medical. The control of

hospitals, medical schools and institutions must be restored to the profession. Let medical men continue to emphasize, unhampered by invaders from without, the "*quality of their medical service rather than the cost.*" Unhampered, the profession could, without doubt, effect many wise economies and decidedly lower the cost, in particular, of hospital and surgical service.

The truth of the saying, "Man cannot live by bread alone," is established. It needs recognition also that he cannot maintain his health or free himself from disease by medicine alone. By whom prescribed, how, when, and where administered, are factors quite often as important as the particular prescription.

In all times some have dreamed of establishing a social order in which the necessities of life should be free to all, the amenities of life shared by all, secured by an equable distribution of the products of labor, through a division of labor such that a maximum of the good things of life could be enjoyed by all.

Russia, at the price of the untold misery of this generation and the spiritual agony of millions of her people, is trying to hasten social progress and the millennium by rapid revolutionary means. The Soviet experiment should fail, for it is not a voluntary process expressing the convictions of the people, not a normal evolutionary process expressing the social and spiritual progress of the masses. It is rather another experiment in government forced upon the people by those at the helm, backed by the physical force of a powerful military police organization and an active system of espionage.

The majority report of the committee serves to bring to our attention the present disturbing, if not alarming, trend towards socialization of medicine in this country. Efforts and movements in this direction are but symptoms of a world-wide disease acutely aggravated at this time by world-wide economic distress. An increasing number of the idle, the shiftless, the outcasts, the misfits everywhere have been crying, "The

world owes us a living," until many who should know better seem to have come to agree with them.

This report should have thorough and unprejudiced examination, remembering that the people of America are, without doubt, to-day the healthiest in the world and even

now enjoy an enviable state of well-being not shared by those of other lands, a well-being which was attained under a system of society which has no resemblance to that proposed by Karl Marx or his modern imitators.

**Therapeutic Use of Glucose*

By L. H. SMITH, M. D., Winterport, Me.

To-night I wish to call your attention to the therapeutic use of glucose as a preventive of and a cure for medical and surgical shock.

Considering for a moment the purposes of the three main food elements, we know that the fats and carbohydrates supply heat and energy to the body, and may act as protein spacers. The caloric value of the fats is twice that of the carbohydrates, but without a sufficient amount of carbohydrates the fats go on to an incomplete combustion, and instead of supplying heat and energy produce betahydroxi buturic acid, aceto-acetic acid and acetone. The betahydroxi buturic acid is practically harmless, but it is the aceto-acetic acid bodies that are so toxic, and a certain amount of these bodies in the human organism spells death. Protein builds tissue, and yields also a small amount of glucose for immediate need or to be converted into glycogen.

In whatever form the carbohydrates are ingested, the end result of the process of their digestion is the formation of monosaccharides, and the most important of all these by far is glucose. Even levulose and galactose may be converted into glucose, carried to the liver as such and converted into glycogen.

Glucose, if it can be spared, is, during its passage through the liver, converted into glycogen; if needed immediately it enters the systemic circulation. This can well be represented or shown by means of a blood

sugar curve obtained by giving from 25 to 30 grams of glucose the first thing in the morning before any food is taken, specimens of blood being withdrawn from a peripheral vein at 30-minute intervals, and the sugar content estimated. The normal fasting blood sugar is from 0.08 to 0.1 per cent. In one-half hour after the glucose meal it rises to 0.14 per cent. or 0.16 per cent. This increase in percentage is due to some of the absorbed sugar passing through the liver and entering the systemic circulation. During the next hour the blood sugar falls steadily to its original level, as the tissues remove the glucose for energy or storage purposes. The blood sugar may even fall to a sub-normal percentage, due to a compensatory secretion of insulin, for if a second quantity of glucose is given the rise of the blood sugar is not as great as the previous one.

Glucose is a threshold substance which is normally absorbed by the renal tubules from the glomerular filtrate, and the normal threshold is about 0.18 per cent.

The physiological process in the liver concerning the conversion of glucose to glycogen, and again the ultimate consumption of glycogen, is an intricate one. We know that glycogen is normally present in the liver of well-fed individuals, and that the liver plays an important part in regulating the blood sugar level; that when the sugars are absorbed from the blood stream or intestine, glycogen is stored in the liver;

that if the systemic blood sugar tends to fall, glycogen is mobilized and sent out to supply skeletal and cardiac tissue.

The assimilation limits of glucose are as follows: If 0.8 grams of glucose per kilogram of body weight is injected intravenously hourly, it can be utilized indefinitely and none appears in the urine. This, it is understood, is in an individual whose pancreatic function is normal. If 1 to 2 grams per kilogram are given some excess spills over and is excreted in the urine, the fraction slowly increasing as the amount of glucose is increased.

It is also interesting to know that the absorbing property of the intestine never exceeds 1.8 grams per kilogram per hour, so that little loss in the urine is expected following glucose ingestion in man.

Returning for a moment to metabolism: The combustion of fats proceeds to completion by producing $C O_2$ and water only if sugar is burnt in adequate amounts at the same time. If the sugar supply is inadequate, as in starvation, toxemias of prolonged fevers, and sepsis when the caloric intake is insufficient to supply heat and energy, or if the sugar is not utilized, as in diabetes, the incomplete combustion of fats as before stated yields aceto-acetic acid and acetone. Therefore, the carbohydrates are termed antiketogenic, and again I wish to emphasize that of all the monosaccharides, glucose is the most important, as the presence of glucose in a utilizable form is essential for the complete combustion of fats.

All the rôles of glucose are vital ones, and it is essential for the contraction of all muscle, therefore, glucose in large quantities is recommended in the treatment of cardiac failure. (Note from Wright's Physiology: The contraction of cardiac muscle like that of skeletal muscle probably depends upon the liberation of lactic acid from glycogen.)

Very gratifying results from a surgical standpoint as a preparatory step in liver and gall bladder surgery, severe brain concussion, and sepsis are obtained by the use of glucose.

Last fall, during the visit of the men from the Lahey Clinic, Dr. Clute spoke very enthusiastically about its administration in connection with direct blood transfusions as a pre-operative step in gall bladder surgery. He prefers direct blood transfusion to the citrate method, in that it hastens the clotting time, especially in those patients who are jaundiced. The liver, which performs the rôle of regulating the blood sugar level, is about to be insulted by an operative procedure, and if the blood sugar falls below normal and is unable to be reimbursed from the liver, serious results may occur, so that glucose previously administered renders service to the body as a whole. Some authorities consider it an important factor in preventing post-operative vomiting.

Since the advent of the automobile the orthopedic beds have been continually filled and the surgeons worked overtime. One of their greatest problems has been the severe brain concussions. In case of a fractured skull many times a trephine and elevation of the depressed fragment alleviates the dangerous symptoms, and the patient makes a rapid recovery. In case of a severe concussion, however, a trephine will only relieve the pressure over a small area, and no benefit is obtained, for the brain is totally enlarged, intracranial pressure raised, the patient vomits, the pulse becomes slow, breathing becomes slower and slower, and the patient dies. In treating such a case ice caps are applied to the head, physiological salines given intravenously, magnesium sulphate by mouth if the patient is able to retain it, and such treatment gives encouragement, for vomiting becomes less frequent, breathing approaches normal and alarming symptoms disappear. This is only for a short time in the severe case, however, when all the old symptoms manifest themselves again and the patient goes out. The improvement following the above treatment was due to a temporary decrease in intracranial pressure.

For some time now, it has been the custom of many brain surgeons to use 50 to 100

c. c. of a 50 per cent. solution of glucose in preference to all other measures. The glucose in this high concentration causes the same decrease in intracranial pressure, but the decreased pressure is maintained for a much longer period. Most of these patients in the past were doomed. Under this treatment many now recover.

In diabetic coma the onset is foreshadowed by certain clinical manifestations as headache, nausea, vomiting. Respirations are slow and deep, and the patient gradually lapses into a state of unconsciousness. The factors responsible for this are again our old acquaintances, the acetone bodies. Acidosis is present, the kidneys are offended, usually albumin and casts are present in the urine, and there is glycosuria. The blood urea and blood sugar are increased above normal. The administration of insulin provides the factor which is lacking. It breaks the vicious circle and restores the normal state of affairs, the blood sugar is lowered, the ketone bodies diminished. The increased combustion of glucose tends to raise the respiratory quotient. If glucose is given in conjunction with insulin, the ketoses disappear.

Believing that I understood the physiological action of the digitalis bodies on cardiac muscle fibers, I have been very reluctant about being divorced from the use of digitalis in the treatment of pneumonia. However, being almost overwhelmingly overcome by the arguments of my colleagues, and by recent clinical reports, I am beginning to believe it to be of little use unless an organic cardiac lesion already exists. I have long believed in the use of sugars as a therapeutic agent in pneumonia, and feel that their use, along with copious amounts of fluid, is extremely valuable.

To children with pneumonia I give a jar of strained honey, and usually they partake of rather large amounts in every twenty-four hours. To adults, I usually prescribe 4 to 6 ounces of sugar or corn syrup, the juice of three lemons to a liter of water, and encourage the ingestion of at least 96 ounces in every twenty-four hours. If the patient

is unable to take this, or to retain it, then intravenous treatment is instituted, 1,000 c. c. of a 5 to 10 per cent. solution of glucose being given every eight to twelve hours, depending upon conditions. The large amounts of fluid are most practical when given in a hospital, but in private practice, and especially in remote rural communities, the concentrated solutions are the most compatible with good treatment. I have chosen the following case as an illustration, because the condition was no doubt as grave as any I have ever seen which ended in recovery.

1] This man, 30 years of age, of normal health and vigor, and in fact quite an athlete, did well with his pneumonia for seven days, when his condition became grave. He had all the symptoms of a failing circulation, he was cyanotic, pulse 136, temperature 104, edema of lungs, respirations shallow and 60 per minute. All the evidences of dissolution were at hand. 200 c. c. of 50 per cent. solution glucose were given intravenously; within two hours his pulse had dropped to 120, and his general condition was greatly improved. The following morning, at 5.00 o'clock, I was called by the nurse, who said the patient was rapidly failing, and I again found him in medical shock. I again gave 200 c. c. of the 50 per cent. solution, to which he responded as before. His blood pressure improved, pulse became stronger and slower. His convalescence was prolonged but uneventful, with the exception of a phlebitis of his left leg. His recovery I attribute entirely to the use of glucose.

Only a word is necessary as to the manner of administration. It depends entirely upon which side of the fence one finds himself, whether hospital facilities are offered, or whether we are back yonder in the sticks. If in a hospital, 1,000 c. c. of a 5 per cent. to 10 per cent. solution: if on the outside, the more highly concentrated solution.

In giving 200 c. c. of a high concentration, I have no concern except that it run freely and continuously. One of the difficulties encountered is that after a few injec-

tions I find all the good veins I have used thrombosed.

If more than 500 c. c. are given, not more than 500 c. c. should be given in an hour. In using the lower concentrations and larger amounts of fluid, the glucose is added to physiological salt solution.

The average amount of glucose for an adult is about 1 gram per kilogram of body weight, for the initial dose at least, and subsequent doses may be increased if desired. To give less than a therapeutic dose is a common mistake and accounts for some of the disappointments. Some other conditions which are benefited by its use I shall only mention:

1. As an emergency food in cases of gastric ulcer with pyloric obstruction.
2. Marasmus.
3. The vomiting of pregnancy.
4. Insulin shock.

In giving these facts concerning the benefits of and the physiological action of glucose, I have advanced no original ideas, but

failing myself to find much in medical literature regarding its use other than its mention as a therapeutic agent for certain conditions, felt that perhaps to assemble some data might be of benefit, especially to the men who, like myself, are not always in easy access to the hospital, to show that glucose rarely, if ever, does harm (unless the blood sugar is high), and in many instances may prove a life saver. I have rarely, if ever, seen its use in severe illnesses not attended with good results, even though they may be temporary.

In conclusion, I wish to re-emphasize the frequent vital complications of certain surgical and medical conditions, the anhydremic shock dependent on simple loss of blood value, as in diabetes, and the toxemic shock dependent on cardiac or capillary paralysis of bacterial or protein origin. A fitting example of the last cited condition is pneumonia. That one of the best combatants for these conditions is glucose, I firmly believe.

**The Anemias: Their Diagnosis and Treatment*

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PART II.

Pernicious Anemia:

Pernicious anemia is a chronic disease, characterized by remissions, the primary cause of the anemia being a retarded delivery of the red cells into the circulation. Hemolysis in this disease probably plays a secondary part, as is obvious from the following facts:

1. In the early stages of the disease signs of hemolysis are usually absent, although the morphological changes in the red cells are clearly evident.

2. The red cells may survive as long in pernicious anemia as in health.

3. The reticulocyte count is low, suggesting that few cells are leaving the bone marrow, whereas in hemolytic anemias, such as acholuric jaundice, the reticulocyte count is high.

4. The excretion of bilirubin derivatives in the stools may be very different in different individuals with pernicious anemia, although the hematological and clinical picture is the same.

5. When remissions occur, the signs are those of increased activity of the bone marrow, and not of a diminution of the pathological hemolysis.

*Clinical lecture delivered in the Graduate Course at the Rumford Community Hospital.

The chief manifestations of pernicious anemia can be held in abeyance as long as adequate amounts of a specific substance contained abundantly in liver, kidney, and stomach are received. Castle's^{24, 25, 26}, recent epoch-making researches mark this condition as a deficiency disease. He fed finely divided raw beef muscle to patients with pernicious anemia without any demonstrable effect on blood formation. He then fed to these same patients similar quantities of beef muscle recovered after partial digestion from a normal human stomach, and then incubated. There was a marked improvement. It is probable that by some interaction of normal human gastric juice and beef muscle, both of which individually are ineffective, a substance is produced which is capable of promptly and markedly relieving the anemia of Addison's type. These experiments support the hypothesis that the development of pernicious anemia is dependent upon an inadequate gastric digestion of proteins, thus permitting the development of a virtual deficiency in the presence of a diet adequate for a normal man.

Achlorhydria is the most constant finding in cases of pernicious anemia and may precede the onset of symptoms by many years. Indeed, the reported cases of pernicious anemia in which hydrochloric acid was found are so few that doubt has been raised as to their validity. Undoubted cases of pernicious anemia have appeared following gastritis due to alcoholism. Pernicious anemia has developed following total gastrectomy. Up to the present time seventy-two cases of total gastrectomy have been reported, the last from the Lahey Clinic²⁷. Of this number of gastrectomies, three cases (Hartman²⁸, Moynihan²⁹, Dennig³⁰) developed pernicious anemia. In Moynihan's case of cancer of the stomach no blood studies were done. The patient died of severe anemia, and post-mortem examination revealed no evidence of metastases.

10% to 13% of people coming to hospitals for various digestive disturbances show com-

plete absence of free hydrochloric acid from the stomach (Lerman¹¹, Eggleston³¹). According to Moore³², the incidence is still higher, being about 22%. Among normal people the incidence is about 4%; among children six to fifteen years it is about 2%. Conner³³ has shown that while achlorhydria cannot be proven a hereditary condition, it shows a definite familial tendency, the incidence being as high as 26% among blood relatives. This condition increases with each decade, being highest between forty and fifty years of age. Just why pernicious anemia does not develop in all cases exhibiting achlorhydria has not been determined. It is possible that even in the absence of free hydrochloride acid the hypothetic substance necessary for the early digestion of proteins may remain active for a long time, pernicious anemia developing later on.

Two conditions associated with achlorhydria deserve special consideration, namely, the anemia of sprue and of bothriocephalus latus, or fish tape-worm. Sprue, or psilosis, is supposed to be an inflammatory condition of the alimentary tract occurring in tropical climates and characterized by soreness of the tongue, chronic fatty diarrhea, wasting and anemia, with tendency to remissions and relapses. Ashford³⁴, in his study of twenty-four cases of sprue, found fifteen that developed the megaloblastic type of anemia; of these, six yielded to liver treatment. The megaloblastic anemia of sprue is not quite the same as true uncomplicated Addisonian anemia. In the former, most of the red cells tend to be round normoblasts, and megaloblasts in the circulating blood are not common. Several questions arise at this point. Does achlorhydria develop in sprue, or is it a precursor of the disease? Does anemia occur in sprue only in cases in which achlorhydria is present? Why is it that only a small percentage of these cases react favorably to liver? Moschcowitz³⁵ is of the opinion that the anemia of sprue and that of pernicious anemia are two entirely different conditions.

The hematologic and clinical picture of pernicious anemia and the anemia sometimes

seen in cases infested with bothriocephalus latus, or tape worm, are identical, even in respect to achlorhydria. In certain countries, as Finland, where infestation with bothriocephalus is very common, the incidence of pernicious anemia is very small, being about 1%. The anemia often persists after the worm is expelled. Bothriocephalus is not the only parasite that has been brought into causal relationship with pernicious anemia. A good many other helminths have been reported as the "causes" of pernicious anemia, and curiously the number of such cases reported is proportionate to the frequency with which the parasite is encountered in man. In all probability this is merely a chance association of two separate and unrelated conditions.

The entire subject of achlorhydria and its relation to conditions other than pernicious anemia is admirably reviewed by Moschowitz³⁵ and McLester⁶³.

Symptoms of Pernicious Anemia:

The onset of the disease seems to be gradual, and is often so insidious that it is apparently unnoticed by the patient or his family. The color of a patient with pernicious anemia is commonly compared to that of a lemon or a primrose, but actually it may vary from the whiteness of a true pallor to a marked yellow-brown color. The pigmentation is obviously associated with excessive blood destruction. All the usual symptoms of anemia are present, that is, muscular weakness, general lassitude, and dyspnea upon exertion. In addition, there may be edema of the ankles.

Gastrointestinal disturbances are common. Soreness or rawness of the tongue is a frequent complaint. Anorexia, nausea and heartburn may be present. Attacks of diarrhea often occur. Loss of weight is not generally regarded as common.

There are frequently in pernicious anemia certain symptoms and signs attributable to changes in the central nervous system. An excellent review of the neurological complications in pernicious anemia is given by

McAlpine³⁷ and Davison.³⁸ The nervous symptoms may long precede the clinical manifestations of the disease. Various forms of paresthesias are common at the onset, such as tingling, numbness, coldness, tightness, pins and needles, etc. Later, a feeling as if something were tied around the leg, or a sensation of walking on cotton-wool is a frequent complaint. The paresthesias are usually referred to the periphery of the limbs. Absence of deep reflexes in the lower limbs may occur. The histological changes in the cord affect the posterior columns to the greatest extent, but the cerebellar and pyramidal tracts are also involved. Mental changes may develop. These may consist of lack of mental energy or depression, mild confusion, or even a toxic psychosis.

The most striking physical finding is, as a rule, the color of the patient, which, as has been mentioned, is usually described as lemon-yellow. The conjunctivæ are usually icteroid. The heart may be enlarged. Systolic "hemic" murmurs are common, and rarely diastolic murmurs have been noted. The spleen is usually palpable. The tongue is smooth and atrophic. Involvement of the central nervous system is associated with alteration in the reflexes.

Blood Findings in Pernicious Anemia.

There is reduction, both in the number of red blood cells and in the amount of hemoglobin, but the latter is relatively less diminished than the former. In other words, the color index is above unity. This means that the amount of hemoglobin per corpuscle is increased and that the average size of the red cells is larger than normal. The average diameter of normal red cells is 7.2 to 7.4 micra; in pernicious anemia it is 8.6 micra.

Stained films show clearly that there is considerable variation in size (anisocytosis) and in shape (poikilocytosis). The most striking feature, however, is the presence of a variable number of unusually large fully hemoglobiniferous red corpuscles (megalo-cytes). Anisocytosis is to be regarded as

evidence of active regeneration processes in the bone marrow, and is therefore absent in aplasia of myeloid tissue. Poikilocytosis is to be interpreted in a similar manner, but is a more definitely abnormal mode of regeneration than is anisocytosis. Punctate basophilia, or stippling, is often seen, especially during remissions, and is a sign of abnormal regeneration of bone marrow. Polychromasia is at times seen, indicating active regeneration of a normal type.

Nucleated red cells (normoblasts) appear in the blood at some time in all cases of pernicious anemia, but cannot be regarded as being pathognomonic of the disease. Megaloblasts also appear in the blood, their number being greater during the definitely anemic stages of the disease. In a few cases so-called "blood crises" occur during a relapse, characterized by the presence of a large number of normoblasts in the circulating blood for a few days. Such a crisis is usually followed by a transient improvement, but never by a well-marked remission. It is due to an intense regenerative effort on the part of the bone marrow.

Leucopenia is usual in pernicious anemia, due mostly to a reduction in the number of neutrophils. There is a relative lymphocytosis. The neutrophils show evidence of hypermaturity in that some are large and have an excessive number of nuclear lobes. The eosinophils are also usually reduced in number. Basophils are generally absent and monocytes are decreased. The blood platelets are markedly reduced in number.

In general, there is evidence in the circulating blood of vigorous formative activity, which is partly normal in type (normoblastic), but in part abnormal (megaloblastic).

The bone marrow shows an increased amount of myeloid tissue in the long bones which are completely filled with red formative marrow (hyperplasia). Histologically the bone marrow shows active erythropoiesis.

Treatment of Pernicious Anemia.

The present-day treatment of pernicious

anemia with liver substance, as advocated by Minot³⁹ and Murphy,⁴⁰ is well known. A prolonged remission in the condition of the blood is speedily produced, which continues only as long as the liver is administered. When the hepatic substance is discontinued, the blood relapses. Remission was formerly sought by blood transfusions, injections of whole blood, and arsenic. The nature of the last mentioned agents precludes their continuous use. Liver and liver extract can be used continuously and thus provide constant stimulation to the maturation of new cells, or protection against hemolysis of poorly-formed elements of the blood. The best guide for the efficacy of liver therapy is the reticulocyte response. If the red cell count is below one million, the reticulocyte count under liver treatment will rise to 35% to 55%, when the count is one to two millions, it will rise to 20% to 30%; when the red cell count is above two millions, the reticulocytes rise to 8% to 15%. The peak of the reticulocyte response reaches its maximum on the sixth to ninth day after institution of liver treatment.

The ordinary uncomplicated case of pernicious anemia requires daily 240 grams of liver, which should be taken raw or slightly steamed or broiled. It should never be well cooked. There appears to be no therapeutic difference between beef, calf, or hog liver, although usually calves' liver is preferred by patients. A domestic liver extract has been devised by Gastle and Bowie.⁴¹ Kidney substance fed in amounts of one-half pound daily produces the same effect as liver. If at the end of ten days after institution of liver therapy there is no or little improvement, the dose should be increased or the preparation changed.

The discovery of the effectiveness of liver in the treatment of pernicious anemia stimulated studies in the isolation of the active principle. Cohn^{42, 43} and his associates were finally able to obtain from liver a water soluble extract, so-called fraction G, which is as potent as whole liver. This extract is

sold now as liver extract No. 343. The contents of one vial (about 4.5 grams) are equivalent to 100 grams of raw liver.

Parenteral liver therapy has recently come to occupy an important place in the treatment of pernicious anemia. In 1929 Cohn, Minot and their associates⁴⁴ prepared a water-soluble liver extract pure enough for intravenous administration and producing a prompt and marked reticulocyte response. However, very large amounts of liver had to be fractionated to obtain a relatively small quantity of suitable extract. A year later, Aubertin and Voillemin⁴⁵ and Archard and Hamburger⁴⁶ reported satisfactory results from the daily intramuscular injection of the material derived from about 400 grams of liver, and later in the same year Gänsslen⁴⁷ obtained excellent results in the treatment of pernicious anemia by the daily intramuscular injection of an extract derived from only 5 grams of liver. Independently, Castle and Taylor⁴⁸ reported maximal responses following a single intravenous injection of extract derived from 100 grams of liver, and subsequently Strauss, Taylor, and Castle⁴⁹ obtained very satisfactory results by the intramuscular administration of practically the same extract derived from 20 grams of liver. This has been confirmed by Murphy⁵⁰ and Connery and Goldwater.⁵¹

There seems to be no difference in the effect on blood formation between intravenous and intramuscular injections. The former at times produces systemic reactions; the latter does not. Local reactions to intramuscular injections of liver extract are at times seen in patients who have previously been receiving liver or liver extract by mouth.

The maintenance dose of liver extract when given intramuscularly has to be determined in each patient. In the average case, however, 2 c.c. intramuscularly daily is sufficient during a relapse. Some, however, may require 5 to 20 c.c. When the blood has become normal, two or three injections a week may suffice.

The indications for parenteral (intramus-

cular) liver therapy in pernicious anemia, according to Strauss and Castle⁵², are:

1. Patients who are severely ill.
2. Patients who cannot tolerate adequate amounts of liver or liver extract by mouth because of gastrointestinal symptoms.
3. Patients who cannot afford the expense of the necessary quantities of potent material by mouth.
4. Resistant cases; that is, patients who fail to improve satisfactorily on maximum amounts of potent material by mouth.
5. Patients with progressive or stationery neurologic signs or symptoms.

West and Howe⁵³ have succeeded in isolating a crystalline product derived from liver which is suitable for both intramuscular and intravenous injections, the effect of a single dose lasting two to three weeks. However, there is an enormous loss during the process of preparation of this material, so that it is of no practical use.

Following the work of Minot, Murphy, Castle and their associates, that the stomach normally produces a blood-maturing principle from meat, the active gastric juice itself and also whole stomach tissue was investigated. Sharp⁵⁴ and Sturgis and Isaacs⁵⁵ obtained from dessicated hog's stomach a water soluble substance which is highly potent in bringing about a remission in pernicious anemia. Thirty grams of this substance obtained from about 200 grams of fresh tissue is equivalent to 300 to 600 grams of fresh liver. Stomach tissue, per gram of material, is more active than liver, and a smaller amount is necessary to induce a remission. The use of dessicated stomach material is discussed by Brower and Simpson⁵⁶.

With liver or dessicated stomach therapy properly carried out the blood in cases with pernicious anemia should be normal, or nearly normal, in from six to eight weeks. Failure to obtain desired results is usually due to the following causes:

1. Treatment improperly administered.
2. Inert or weakly potent extracts.
3. Complicating infections.

No special diet is necessary. It has not been proved that dilute hydrochloric acid is essential.

As mentioned previously, the liver or desiccated stomach therapy produces a prolonged remission in patients with pernicious anemia. However, there are cases in which the bone marrow becomes exhausted, with the blood elements reaching a fixed level in a condition of chronic "torpid" anemia. Cary⁵⁸ reports three cases of pernicious anemia with a fatal termination in spite of a properly administered liver diet.

Morris and his associates⁵⁷ have recently demonstrated that normal gastric juice contains a very potent hematopoietic hormone for which they proposed the name "addisin." This material, when injected intramuscularly, stimulates the bone marrow to a remarkable degree. These investigators believe that the absence of this substance is the cause of pernicious anemia. It acts more rapidly than any agent hitherto employed for the treatment of Addisonian anemia.

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Case Records of the Central Maine General Hospital

Edited by JULIUS GOTTLIEB, M. D.; Assisted by MAURICE DIONNE, M. D.

CASE VI

DYSPNEA AND DROPSY IN A FORTY-FIVE YEAR OLD PATIENT

PRESENTATION OF CASE

Dr. W. J. Renwick: This patient was a forty-five year old, married American woodsman, who came into the medical wards the first week of February. His story went back three years and was briefly as follows:

He had pneumonia three years ago and dated the onset of the present illness to that time. He first noticed dyspnea coming on after moderate exertion. It had steadily and gradually increased in intensity. The next development occurred three months ago, when he had his first attack of nocturnal dyspnea, lasting about ten minutes. This occurred repeatedly, and usually appeared shortly after the patient went to sleep.

Three weeks ago the patient was severely dyspneic, and required at least two to three pillows for sleep. He noticed some palpitation, the heart pounding quite heavily on occasion. He had pain and tenderness in the right hypochondrium. He also had an increase in the size of his abdomen and marked edema involving both legs, up to the mid-thighs. Headaches and nervousness appeared, as well as a slight cough.

In the past he gave a history of several attacks of rheumatic heart disease in childhood. Otherwise his past history is negative. He never noticed any dyspnea until the appearance of the pneumonia.

On physical examination, he was well nourished. There were marked pulsations of the jugulars, even with the patient sitting upright. The chest was moderately barrel-shaped. Occasional moist râles were heard at the base of the lungs. The apex impulse was leaping, the maximum site, 13 cm. from the midline in the fifth interspace. The action of the heart was forced and regular, the rate being 96/min. On auscultation, over apex, there was a long, soft, diastolic murmur, and the first sound was replaced by a loud systolic murmur. Over the aortic area, this systolic

murmur was well heard, and was transmitted over the course of the large vessels and over an area three inches in diameter, to the right of the sternum, at the level of the second rib. A palpable thrill, systolic in time, was present in the aortic area. The pulse was regular and there was no pulse deficit. There was marked tenderness over the liver region. The liver was palpable, three fingers below the costal margin, and was not pulsating. There was pitting edema at the ankles. The skin was generally pale, and presented a yellowish cast.

The blood pressure was 135/65 mm. hg. on entry. The white blood cells were 12,000 per c. mm., with 72% of them neutrophils. The urine had a specific gravity of 1.014, and was not remarkable.

The electrocardiogram showed a heart with irregular sinus rhythm, a rate of 90/min. P-R interval up to maximum, wide Q.R.S. .12 sec., and left axis deviation. T. waves inverted, all leads. A diagnosis of intraventricular block was made from this tracing.

The patient was given digitalis, gr. iii T.I.D., and was placed in a comfortable position. He failed to improve under treatment, and died four days after entry.

CLINICAL DIAGNOSIS FROM HOSPITAL RECORDS

Valvular heart disease with mitral and aortic involvement.

Cardiac failure.

Hypostatic pneumonia.

CLINICAL DISCUSSION

Dr. Paul White: We can feel quite certain about the etiological structural and functional diagnoses in this case. We have the history of several attacks of *rheumatic infection* in youth, the signs of *aortic stenosis and regurgitation*, and of marked cardiac enlargement, besides the symptoms and signs of *con-*

gestive failure of both ventricles (nocturnal dyspnea in attacks in the past, indicating acute failure of the left ventricle, and dependent edema, later, indicating chronic failure of the right ventricle). Luetic aortitis with aortic regurgitation and heart failure would be a second possibility, but much less probable, since an aortic, systolic thrill is much more likely to mean aortic stenosis, and since there is a clear history of rheumatic infection here, and we do not have to assume lues, too. However, it should be stated that now and then both rheumatic and luetic factors do occur to cause cardiovascular disease in the same patient, and so we must not be too dogmatic in any case, in stating that only one or the other factor is present.

ANATOMICAL DIAGNOSIS

Calcification of aortic valve, with stenosis (rheumatic).

Mitral disease (rheumatic).

Hypertrophy and dilatation of heart.

Hypostatic pneumonia.

Acute and chronic passive congestion of the liver, spleen and kidneys.

Pulmonary tuberculosis.

POST MORTEM FINDINGS

Dr. J. Gottlieb: External examination shows a well-developed and well-nourished white man of about 45 years of age, presenting no rigor mortis, lividity, injuries or wounds. There is a pitting edema at both tibiae and ankles.

Eyes: Pupils unequal, right pupil measuring .4 cm., left pupil about .1 cm., with a scar apparently from a previous operation partially occluding it.

Mouth: Upper teeth false; lower teeth show retraction of the gums, and in poor condition.

Peritoneal cavity: Smooth, glistening, no free fluid. About the cecum and transverse colon are numerous foreign omental adhesions. Appendix free, measures about 5 cm. in length. No palpable mesenteric lymph nodes. Right dome of the diaphragm fifth intercostal space, left at sixth.

Pleural cavity: Numerous fine fibrous adhesions about the apex of the right lung between the lobe of the right lung, between the

lobes of the left lung, and at the base of the left lung. No free fluid found.

Pericardial cavity: Markedly distended, containing about 250 c.c. of a clear, straw-colored fluid.

Heart: Markedly enlarged. Weight of the heart, containing blood, 1,450 grams. Weight of heart, empty, 1,000 grams. Measurements: Base 11 cm., 7.5 cm. to the right midsternal line, making a total transverse diameter of 19.6 cm. Largest oblique measurement, 20 cm. Lesser oblique, 11 cm. Right ventricular wall 1.4 cm. thick. Left ventricular wall 2 cm. thick. Length of the left ventricle, 11.4 cm., its greatest diameter 10 cm. Tricuspid valve measure, 13 cm., is not remarkable. Mitral valve measures 11.2 cm. The free borders of the valve are studded with numerous nodules. Aortic valve measures 7 cm. and presents a thickened calcified irregular ring, which is difficult to section.

Lungs: Right lung weighs 700 grams; at its apex is fibrous, and on the surface of the lung near it are numerous fine greyish tubercles suggesting active tuberculosis. Left lung weighs 600 grams; on the surface of its apex are similar greyish tubercles. Both lungs are markedly edematous and congested. There are palpable glands in both hyla. On section, the knife meets with a gritty resistance.

Spleen: Weight, 300 grams, markedly congested.

Liver: Weight, 1,000 grams, and on section is markedly congested, presenting a typical nutmeg appearance.

Gastrointestinal tract: Essentially negative.

Pancreas: Not remarkable.

Kidneys: Both weigh 400 grams. On section, cortex measures .5 to .7 cm. Calices well defined. Kidneys markedly congested. Capsules strip with ease, leaving a slightly fine granular surface.

Adrenals: Essentially negative.

Bladder: Negative.

Genitalia: Not remarkable. Prostate feels soft and smooth, and within normal dimensions.

Aorta: Smooth and elastic down to and including the iliac arteries.

FURTHER DISCUSSION

Dr. Paul White: As we had surmised

would be the case, rheumatic valvular disease was discovered at post-mortem examination in this patient, and the aortic valve was the one chiefly affected. Superimposed on the chronic rheumatic lesion, calcareous deposition was found.

Dr. J. Gottlieb: The size of this heart is quite remarkable. Large hearts are seen in essential hypertension, mitral insufficiency and in aortic lesions. In the latter group, the heart is the largest. In mitral disease, decompensation usually exists over a relatively long period, and can be fairly well controlled by medication and proper hygiene. This also holds true for other types of decompensation.

In aortic lesions, particularly of this type (rheumatic calcification), the heart grows progressively larger over a long period, with a remarkable absence of symptomatology, even as long as twenty or thirty years, and when the break comes, it is precipitous and drastic, presaging a poor prognosis, and death within a few months.

Dr. W. J. Renwick: Christian and others now claim that the hypertensive heart often is larger than the aortic type. Christian calls the hypertensive heart *Cor. elephantinum*, as compared with the *Cor. bovinum* of aortic insufficiency.

CASE VII

SUDDEN COLLAPSE IN A MAN OF FIFTY-SEVEN

PRESENTATION OF CASE

Dr. W. J. Renwick: Two days ago this patient, 57 years old, remarked to his son that he felt especially well; he ate his usual breakfast and at 10.30 A. M. stopped at a gasoline filling station. While talking to the man in charge he suddenly fell to the ground, and ten minutes later was seen by two physicians. He vomited twice and was in a state of collapse. His pulse could not be felt at the wrists, and, though semi-conscious, he was quite restless. Stimulation was administered in the form of digalen and strychnine, and he was taken to his home. Eight hours later his pulse was palpable, and he vomited blackish fluid on two occasions, which the physician thought contained blood. He remained in a semi-conscious condition. The first physician who saw him noted that the left pupil was larger than the right, and there was ptosis of the upper left lid, both conditions were transient. Forty-eight hours after the original seizure he had not voided, and no urine was obtained by catheter. He was brought to the hospital about sixty hours after the seizure, and three ounces of urine were obtained by catheterizing. Hiccough had persisted from the first. The blood pressure was so low that no satisfactory record could be obtained. Six days previous to the onset he had an attack of precordial distress, lasting one hour. In the past the patient had always been well.

On admission to the hospital the heart

sounds were distant and of poor quality. The fundi oculi showed a hazy vitreous, pale nerve heads, small retinal vessels, somewhat tortuous and thickened, with no evidence of hemorrhages.

He was given 100 c. c. of 50% glucose solution, and $7\frac{1}{2}$ grains of caffeine and sodium benzoate, intravenously, with a very satisfactory response; the pulse became palpable with a rate of 80, and a slight arrhythmia, due apparently to extrasystoles. The heart was not enlarged, the apex being inside the mid-clavicular line in the fifth interspace. No evidence of valve pathology was present, no friction sounds were heard over the heart. The patient at no time had a cough. The initial response to stimulation was not maintained. After six hours the progress was rapidly downward; the heart rate became very rapid and the sounds distant and muffled.

A diagnosis of coronary infarction seemed justifiable and in view of the anuria and the high nitrogen content of the blood.

The laboratory studies showed a red blood count of 4,400,000 with 5 erythroblasts per 100 white cells. The white count was 13,400 per cm. with 61% neutrophils and 37% lymphocytes and 2% endothelials. The blood sugar was 140 mgs. per 100 c. c. on entry, and 129 mgs. per 100 c. c. the next morning. The non-protein was 75 mgs. per 100 c. c. blood. The creatinine 2.2 mgs. per

100 c. c. and uric acid 4.0 mgs. per 100 c. c. The Kahn and Kline-Young tests were negative. The urine was dark amber in color, and acid; specific gravity, 1.016, and showed a trace—too large a trace—of albumin. Many urate crystals were present; few finely and coarsely granular casts, and rare leucocytes were seen.

An electrocardiogram was taken the second day of admission. It showed some extra systoles in a heart with a rate of 100 per minute. There was a variable Q. R. S. with tendency to low voltage and the T-wave was isoelectric in Lead I. The axis deviation was normal.

The patient did not continue to improve under treatment and stimulation (except for a few hours after admission). Death occurred forty hours after entry.

CLINICAL DIAGNOSIS FROM HOSPITAL RECORDS

Coronary Occlusion.
Cardiac Infarct.

CLINICAL DISCUSSION

Dr. Paul D. White: The overwhelming collapse and state of shock that suddenly prostrated this man were obviously caused by a very serious vascular accident of some sort. The three most likely lesions that must be considered are (1) Intercranial hemorrhage, which might be subarachnoid rather than cerebral. (2) Extensive myocardial infarction from coronary thrombosis. (3) Embolism of a large pulmonary artery with extensive infarction of the lung. A fourth rare vascular lesion might be the sudden development (or even rupture) of a dissecting aneurysm of the aorta. The relatively negative electrocardiogram was evidence against coronary thrombosis. With the information that we have, I don't believe that a positive diagnosis can be made without the data from the post-mortem examination.

PATHOLOGICAL DIAGNOSIS

Coronary occlusion.
Cardiac infarct.
Pulmonary infarcts.
Hemato-pericardium following ruptured coronary.

Chronic passive congestion of liver.
Cerebral arterio-sclerosis.
Arteriolar sclerosis of kidneys.
Slight cerebral sclerosis.
Moderate aortic sclerosis.

ANATOMICAL FINDINGS

The body is that of a well-developed and well-nourished white man of about 55, showing no rigor mortis, and slight lividity. Several petechial-like areas are present at the inner aspect of the left ankle, right thigh, and anterior portion of the chest. A purplish discoloration is present at the antecubital fossa of the right arm. Pupils: Right pupil is irregular, presenting a ragged and elongated appearance of its lower margin. The left pupil is rounded. Both measure 2 mm. as an average diameter. Teeth: Absent. No abnormal fluid escapes from nares or oral cavity. Chest resonant anteriorly. Abdomen soft.

Head: Scalp reflects with ease. Calvarium readily removed with a considerable escape of unclotted blood. Dura and pia-arachnoid are well injected. Brain weighs 1,320 grams; is removed without difficulty. Left parietal lobe appears somewhat softened on palpation. Vessels at base of brain are slightly sclerotic, with carotid arteries presenting frequent atheromatous patches and gaping on section. On sectioning the hemispheres, the pons, medulla and proximal portion of spinal cord and cerebellum, no abnormalities are seen except that the smaller vessels throughout appear moderately congested.

Abdomen: Recti are well developed. Peritoneum is smooth and lustrous throughout. No abnormal fluid is present. Liver edge extends 1 to 2 cm. below costal margin. Right diaphragm 7th space; left 6th.

Thorax: Bony cage intact; pleura is somewhat adherent to thoracic wall by thin fibrinous strands at the lower posterior right lobe, which are easily broken up. Right cavity is occupied by approximately 30 c. c. of blood tinged fluid. Left cavity is occupied by approximately 10 c. c. of clear yellow serous fluid. Left lung, well distended, shows a marked degree of anthracosis. It is crepitant throughout, and on section shows no evidence of congestion or induration except

for the dependent portion, which is slightly engorged. Weight of left lung, 175 grams. Right lung weight, 750 grams. Upper lobe is crepitant throughout. Middle lobe presents an indurated highly-injected area involving its posterior three-fourths, whose surfaces raised above the adjoining structure is sharply defined, and which on section shows a moist reddish-brown sanguineous surface. Lower lobe shows a similar involvement of approximately five-sixths of its substance with the anterior lower portion remaining free.

Pericardium and Heart: Cavity is occupied by approximately 300 c. c. of blood, the major portion of which is in the fluid stage. A few unorganized clots are present. Pericardium shows no gross structural changes.

Heart weighs 370 grams. Auricles are somewhat distended with blood, most of which is unclotted. Epicardium presents a considerable excess of adipose tissue, smooth and lustrous throughout, except at anterior surface at its upper left aspect, approximating the left auricular appendage, which presents an area 1.5 by 2 cm., which is injected, slightly raised above the surface. At one situation the left coronary artery appears somewhat ragged, and apparently ruptured.

Measurements:

Left ventricular wall,	1.9 cm.
Left ventricular length,	7.5 "
Mitral valve circumference,	7.9 "
Aortic valve circumference,	6.6 "
Pulmonary valve circumference,	6.1 "
Tricuspid valve circumference,	10.1 "

Myocardium firm, brick red in color; endocardium smooth and lustrous throughout, except in region of left papillary muscle, which is considerably injected and edematous. Coronaries are patent at their orifices, at which situations frequent atheromatous patches are present. Vessels show frequent atheromatous patches with rare areas of calcification.

Aorta: Shows frequent atheromatous patches throughout and calcareous plaques at its iliac bifurcation.

Liver: Weight, 1,800 grams, surface smooth, margins well defined, texture firm. On section margins are sharp and surface pre-

sents a nutmeg appearance. Gall bladder is occupied by approximately 30 c. c. of bile, and no gross structural changes are seen. Pancreas presents a considerable amount of adipose tissue, otherwise not remarkable.

Spleen: Presents no gross structural changes.

Alimentary Tract: Stomach is distended and on section shows mucosa presenting a thin deposit of coffee ground like material. Vessels are markedly injected, numerous petechial hemorrhages are present.

Kidneys: Weight 360 grams, capsules strip with moderate ease, leaving a finely granular surface. Cortices measure .4 to .5 cm. in diameter and are easily differentiated from medulla. Calices are well defined. Pelves, ureters and urinary bladder are not remarkable. Urinary bladder is occupied by approximately 200 c. c. of deep amber-colored urine, which on examination is acid to litmus; specific gravity, 1.020; albumin, large trace; sugar, s. p. t.; few finely and coarsely granular casts, numerous leucocytes, numerous red cells and few waxy casts.

Adrenals: Not remarkable.

Prostate: Slightly enlarged.

FURTHER DISCUSSION

Dr. Paul D. White: The most obvious, extensive, and probably significant discoveries by post-mortem examination were the lesions in the middle and lower lobes of the right lung, consisting apparently of consolidation resembling infarction, and the cardiac pathology. All the other post-mortem findings, it seems to me, are either secondary or incidental. From the data given there is some evidence that there may have been thrombosis and then rupture of a coronary artery into the pericardium, with gradual bleeding, which finally caused death after precipitating in its turn, in some way, the lesion in the right lung. If it were possible to estimate the relative ages of these two chief lesions, we could tell which was the primary and which the secondary, but certainly there was hardly enough evidence, as presented, of an extensive gross myocardial infarct, alone, accounting for the whole picture. It is a very unusual case. I have never encountered one like it.



Social Insurance

By DR. EDWARD H. OCHSNER

COUNTER-SUGGESTIONS

The medical and dental professions of this country are giving the American public the best all-round health services ever enjoyed by any nation and are, on the whole, serving the nation as well or better than any other group of men. These two professions have a very general and most intimate contact with the citizens of the nation. No other professions are in so favorable a position to exert so great an influence for good as are these two if they will but use their opportunity rightly and wisely. If they are to accomplish the greatest possible good they must make still closer contacts with and exert still greater influence upon the political, social and ethical life of the nation. These professions, as a whole and as individuals, must strive unceasingly and untiringly in the future, as in the past, for still further improvements in their respective fields. If unhampered by lay bureaucratic supervision and control in the future, as they have, on the whole, been in the past, we have every assurance that they will proceed to new and greater achievements. If, on the contrary, unduly hampered, we have every reason to expect medical service to deteriorate and medical progress to cease, as it has already done in those countries whose governments have interfered the most.

In order to maintain the high standard of medical services prevailing, the professions must insist that the governments of the various states maintain high standards of requirements for admission to the practice of the professions. In order to accomplish this, continued education of the public in this regard is necessary.

The organized professions, through their proper local organizations, must see to it that all undesirables are weeded out and that the individual members render efficient service for adequate and yet reasonable fees. The professional man who makes unreasonably exorbitant charges for his services is

even a greater menace to private practice than is he who charges too little. The former is the one to blame for most of the antagonism and resentment among the laity, while the latter, because of his unfair competition, makes it difficult for his colleagues to secure the necessary means for graduate work so essential to growth and progress.

Having presented to the attention of my readers through these articles the defects of Social Insurance as practiced at present in foreign countries, and also having shown the dangers of such a system if allowed to become fixed upon the American citizen, I offer as counter-suggestions that the government, instead of wanting to take over new functions and new powers, would do better were it to make every effort to perform acceptably the duties with which it now is entrusted. We of the medical and dental professions insist that the government give better medical services to its prisoners, delinquents, insane, paupers and government wards in general; that it give more serious attention to sanitation and hygiene, particularly to ventilation of public conveyances and places where large numbers of people congregate, and to the prevention of pollution of our sources of community water supply, such as lakes and rivers.

The allied professions, in conjunction with the government, should give more serious attention to the teaching of personal hygiene in our schools, colleges and universities. Our educational institutions should teach the rising generation the value of integrity, industry, thrift and frugality, and that there is no substitute for these, not even legislation. Teach them that trying to keep up with the Joneses is not necessarily a virtue, and that the installment buying of luxuries and trying to keep ahead of the Browns is poor business. Teach them that to learn how to get one's money's worth and to acquire a competence are much more worth while. Teach them that trying to get some-

thing for nothing, particularly through gambling, whether it be crap-shooting, poker, or buying stocks on margin, is fundamentally dishonest and almost invariably leads to disaster.

Better provisions for safeguarding the savings of our workers should be made, and if there is no way of accomplishing this, there should be established a compulsory government insurance against sickness, whereby the individual worker pays for his own insurance, in other words, separate entirely medical services and cash benefits. The physician should under no circumstances be medical adviser and insurance adjuster, as he is, in fact, in all systems of Compulsory Health Insurance now in vogue.

Social Insurance is man's latest attempt at finding a means whereby social justice may be attained, but, like all panaceas so far advanced, it is sure to make conditions worse rather than better. The first and most important thing to do is to secure honest and efficient government, and this cannot be accomplished until the general standard of honesty has greatly improved, which is simply another way of saying that there is no substitute for character of the individual members which make up a nation.

Finally, devise means and methods whereby remuneration and reward shall be in direct proportion to time and energy legitimately expended and to the value of services rendered to society.

While the underlying purpose of Social Insurance is to secure the more equable distribution of wealth and to employ the weapon of taxation in order to secure the necessities and comforts of life to the poor, at the expense of those with larger incomes, the system is, of necessity, a failure, because it does not conform with the foregoing fundamental principle of justice, but instead, rewards the inefficient at the expense of the efficient, the lazy, shiftless and immoral at the expense of the industrious, thrifty and moral. While it is unquestionably true that certain individuals have been and are still receiving money for which they have not

rendered an equivalent service to society, trebling and quadrupling and even ten fold the number of these parasites does not correct the evil. The remedy must be much more fundamental.

This formula will require the best brains of the country for its practical application, but I am firmly convinced that it is the only formula that offers a practical solution to our social and economic ills, not only of the allied professions but of society in general. If it is followed, those members of society who are doing the world's work will have enough money to employ capable dentists and physicians of their own choice and will then be assured adequate and health service.

CONCLUSIONS

The purpose of this series of articles on Social Insurance has been to arouse the rank and file of the medical and dental professions, and through them, if possible, the general public, to an impending danger, and to dispel a number of quite generally held false opinions.

The first of these is the very commonly held belief that the moment a professional man assumes a title and a government position he knows more and becomes more efficient than he ever was before, while the contrary is more often the case because of the enervating effect of red tape and paper work.

The second common error is that by some magic Compulsory Health Insurance is going to escape the favoritism, nepotism, graft, and in fact all of the evils of politics. This is a delusion with which reformers and the intelligentsia in general are commonly afflicted. The practical man of affairs, and particularly the seasoned politician, does not fall into this error. Some time ago, during a heart-to-heart conference, a practical politician said what he really felt and knew to be true. He said, in substance, that we must remember that "We have government by politics, and you and I, or all of us, with a hundred thousand others, cannot change this situation. I do not care whether you remove the control

from the city to the state or to the federal government, it will still be controlled by politics."

The third common error again held, particularly by the reformers and intelligentsia, is that statisticians and economists can solve this problem unaided. Desirable, valuable and even necessary to a complete understanding of the problem as a study by competent economists is, there is one very important fact which many who have made a study of the problem do not seem to be able to realize, namely, that in a matter where personal relation is such an important element, as in the practice of medicine and dentistry, the ordinary formulæ employed by economists do not and cannot apply. Personal relations cannot be measured by any mathematical formula devised. It is too elusive a factor to be measured by monetary or any other standards, and yet of all the factors it is by all odds the most important. Only the individual who has had an extensive experience in the practice of medicine or dentistry, or the one who has had a long and serious illness, seems to be able to evaluate properly this phase of the problem. Then, again, the lack of medical knowledge by economists makes it impossible for them to appraise the difference between the personal individual care of the patient by the private physician and the more or less impersonal mechanical care of the panel or Krankenkasse physician, nor are they so situated as to have access to individual patients, and even if they had, they lack the training to know which is giving the better treatment. From the foregoing it must be evident that this type of study and investigation has its limitations in cases where the personal element enters intimately with a social or economic problem, and if too much dependence is put upon it wrong conclusions are bound to be reached, or to re-state this point a little more concisely let us say that statistics have their value and their limitations. The more personal the matters under investigation the less their value and

the greater their limitations. One writer has expressed this idea very well in the following words: "There is real danger that the economist, lost in the abundance of his researches, finally overlooks the plain and easy road that lies directly before him."

Probably the most common error is the belief that Social Insurance will abolish poverty. To the contrary, it is at best only a palliative, and like all palliatives, if employed for any considerable period of time, always leaves conditions worse than when first employed.

Another common error quite generally made by the more sensitive and emotional is to believe that the receiving of charity is of all things possible the most degrading. Serious as the accepting of charity is to the character of the intelligent and sensitive, there are many other things even worse, and one of these is the quite general practice of malingering which Compulsory Health Insurance and the dole encourage and foster among the workers of a nation. There is this fundamental and very important difference between accepting charity and a health insurance stipend—the former is still considered somewhat of a disgrace, while to get the latter, even through subterfuge, is considered highly respectable and clever.

There are two questions that the Compulsory Health Insurance proponents have never answered, in spite of the fact that they have offered innumerable alibi that do "not alibi" and endless explanations that do not explain. First, why, if Compulsory Health Insurance improves the health of a nation, as claimed by its proponents, is the death rate no lower in those countries that enjoy this "great blessing" than in those countries not so blessed? And, second, why shortly after and since the introduction of Compulsory Health Insurance have the number of days lost by the workers per annum steadily increased? The answer to the first question is that it does not improve the general health of the people, and the answer to the second is that among a very large per cent. of the

working population it substitutes for *the will to get well and the will to work, the will to stay sick and the will to loaf.*

Personally, I am quite satisfied that Germany and England should make their experiments in Social Insurance and Russia her experiment in State Medicine, but I am happy that these experiments are being made three and four thousand miles respectively from our shores. I am firmly convinced that if we can stave off these schemes for another ten years we will be spared them, because they will prove so harmful to medical practice and medical progress and so destructive to national character that we will escape their blight. Time will demonstrate that they are fundamentally wrong, a backward step in civilization.

Human progress in most lines has always been very largely the result of unhampered personal endeavor, and rarely, if ever, the result of governmental action primarily. Will we never be able to learn from experience and must there always be recurrent periods of halt and even retrogression in human progress?

American medicine and dentistry stand to-day at the threshold of their greatest opportunities and beside the abyss of their greatest dangers; the former because of their marvelous advances in the recent past, the latter because they are being pestered and annoyed by a small but vociferous group of misinformed, uninformed, unwise, and in a few instances self-seeking, selfish, self-appointed lay advisers. There are troubled times for these two allied professions; the men who stand firm now will deserve the gratitude of future generations of men and women.

Necrology

**Charles Wilbut Foster, Portland,
1850-1932**

Everywhere known as "Charlie," from his universal popularity, Dr. Charles W. Foster,

of Portland and Woodfords, died at his home November 6, 1932, after a long illness.



He was born in Unity, April 29, 1850, the son of Dr. Thomas Albert and Eliza McManus Foster. He and his mother soon moved to Portland, where he was educated in the public schools, then at Westbrook Seminary, and finally at Colby, graduating in 1871.

Whilst debating in his youthful mind whether to rise to become president of a railroad corporation or to develop into a professional athlete, his father persuaded him to study medicine, which he did for one course of lectures at Bowdoin, and obtained his degree at the Detroit School of Medicine in 1875.

Directly afterward he practiced for a year in Auburn and then removed to Portland for life. He soon obtained a widespread and congenial practice, first in Portland and later at Woodfords, and, like his father, was good at obstetrics, and continued to develop that branch of medical practice for the rest of his life.

He served as jail physician of the city and of the Woodfords district for years, and

attended to debilitated immigrants arriving in Portland under United States jurisdiction. In all the positions of this variety which he occupied he gave satisfaction and was regarded as the man for the place.

He belonged to all of the medical societies in the city, county, and state, and was a marked man for his example of good attendance at meetings which he exhibited during his long life. He was a frequent speaker after papers had been read, but considerable research fails to find from his pen only a single paper and that on "Cremation," in which he believed, and which he asked to be done for him after he was dead.

He was pleasant, agreeable and companionable with his colleagues, and on the best of terms with them. His successful cases abounded in the district of Portland in which he practiced so long.

He was fond of reading books on history, was devoted to politics, and belonged to a large number of friendly and charitable societies. Altogether, he liked the companionship of his fellow men.

Dr. Foster married Miss Esther Bennett Parker, of West Buxton, and is survived by her, two daughters, and four grandchildren.

J. A. S.

John Lyman Potter, Portland, 1878-1932

After a long illness, but rapid failure toward the end, Dr. Potter died November 30, 1932, at a local hospital, where he had been confined for some months.

Born in Stark, N. H., April 20, 1878, the son of Lyman and Judith Potter, he was educated in the schools of his native town, and in those of Lancaster near by, then at Bridgton Academy, and finally obtained his medical degree at the University of Vermont Medical School in 1904. He was so brilliant as a student that he was chosen as interne at the Mary Fletcher Hospital in Burlington, Vt., where he served to the great satisfaction of the entire staff.

He was fond of reading medical books and journals, and devoured papers on his favorite diseases, but he rarely, if ever, wrote a paper for a meeting. In his long life in



medicine he practiced five years in East Charleston, Vt., then ten years in Guilford, Vt., and in 1919 he came into Portland for the finish of his career in medicine at Woodfords. He was not only a member of the various medical societies of the state, county, and of Portland, with a good attendance at all of them, but he was devoted to a large number of social and friendly societies, the rites of the Scottish Masons being carried out at his funeral, in addition to those of the Congregational Church, of which he was a very active member wherever he settled in life.

Dr. Potter was fond of books, and read many of those up to date carefully, and with a good memory of their contents.

In early life Dr. Potter married Miss Emma Pearl Dore, of Monson, Me., and is survived by her and two daughters.

J. A. S.

County News and Notes

Androscoggin

The Androscoggin County Medical Society held its annual meeting Tuesday, December 13th, at the Marcotte Home, Lewiston.

Dr. E. D. Merrill, President of the Maine Medical Association, spoke on "Some Suggestions Relating to the Welfare of the Maine Medical Association."

J. GOTTLIEB,
Secretary.

Cumberland

The Cumberland County Medical Society met Friday, November 25th, at the Hotel Eastland.

Prof. William C. Spain, of Columbia University, spoke upon "Food Allergy."

A clinic of unusual interest was held in the afternoon at the Children's Hospital.

DR. WILLIAM HOLT,
Secretary.

The Portland Medical Club held its annual banquet on Tuesday evening, December 6th, at 6.30, at the Eastland Hotel.

Dr. W. W. Dyson was elected President.

DR. E. S. HALL,
Secretary.

Kennebec

The Kennebec County Medical Association held its annual meeting at the Augusta General Hospital, Thursday, December 15th.

The retiring President, Dr. Carter, reviewed the activities of the year in a brief address.

Dr. J. O. Piper, of Waterville, was elected President; Dr. N. B. Murphy, of Augusta, Secretary.

The excellent report of Dr. Murphy showed the affairs of the association to be in good order, the meetings well attended.

Dr. John F. Shaw's paper on "Bronchiectasis" was full of interest and ably discussed by Dr. F. T. Hill, of Waterville.

Dr. Edwin W. Gehring, of Portland, presented an historical paper of absorbing interest. He reviewed the life of John Hunter in a way which made those present realize again that great men never die.

Penobscot

The Penobscot County Medical Association met Tuesday, December 20th.

The speaker of the evening was Dr. Channing Frothingham, Boston, who discussed "Some Controversial Problems of Diagnosis and Treatment."

Clinic at the hospital: Dr. B. L. Bryant, Dr.

Lester Adams, Dr. Harold Pressey, of the Medical Service; Dr. John B. Thompson, Dr. Theodore S. Moise, of the Surgical Service.

Piscataquis

The Piscataquis County Medical Society held its annual meeting on December 1st, at Milo.

The following officers were elected for 1933:

President, F. L. Varney, Monson.

Vice-President, H. C. Bundy, Milo.

Secretary-Treasurer, C. N. Stanhope, Dover-Foxcroft.

Delegate to State Meeting, M. O. Brown, Dover-Foxcroft; alternate, G. E. Dore, Guilford.

E. D. Merrill, of Dover-Foxcroft, President of the State Association, spoke briefly of legislative matters, policies of the State Association, and the activities of the constituent county societies.

Drs. Allan Woodcock and Forest Ames, of Bangor, presented a discussion of fractures of the upper extremities.

C. N. STANHOPE,
Secretary.

News

Dr. Arthur P. Wakefield succeeds Dr. John F. Shaw as Superintendent of the Central Maine Sanitarium. Dr. John F. Shaw, for eighteen years Superintendent of the Sanitarium at Fairfield, has opened an office in Waterville.

Dr. William R. Tymms, for a number of years a member of the Central Maine Sanitarium staff, has moved to Kenduskeag.

Dr. Thomas A. Foster, of Portland, has recently been elected President of the New England Pediatric Society.

The American College of Physicians

Announcement has been made that the American College of Physicians will hold its Seventeenth Annual Clinical Session at Montreal, with headquarters at the Windsor Hotel, February 6-10, 1933.

Dr. Francis M. Pottenger, of Monrovia, Cal., as President of the College, has charge of the program of General Sessions. Dr. Jonathan C. Meakins, Professor of Medicine and Director of the Department, McGill University Faculty of Medicine, is general chairman of local arrangements and in charge of the program of Clinics. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general business arrangements, and may be addressed concerning any feature of the forthcoming session, including copies of the program.



Books Received

The following books have been received at this office. We are grateful to the publishers for calling our attention to these volumes.

Adams' New Surgery, with Special Reference to Podiatry. By Edward Adams, M. D., Professor of Surgery, The First Institute of Podiatry of New York. This book should prove of value to the student, and especially to the practitioner who has to deal with pathological conditions of the foot which are amenable to surgical treatment.

Infants and Children, Their Feeding and Growth. By Frederick H. Bartlett, M. D., Director of the Department of Pediatrics, Fifth Avenue Hospital, New York City. In this book of four hundred twenty-four pages, with complete index, Dr. Bartlett has made a very real contribution. We regard it as perhaps the most worth-while medical publication of the year dealing with these subjects. It tells the story of the care and feeding of infants and children in a simple yet scientific manner. The book is published by Farrar & Rinehart, Inc. Price, \$1.50.

Psyllium Seed: The Latest Laxative, a Scientific Treatise. By Dr. J. F. Montague, Medical Director, Montague Hospital for Intestinal Ailments, New York City. Dr. Montague states in his preface, "The substance to which this book is devoted has, to my mind, great possibilities in the adequate treatment of chronic functional constipation." The volume has twenty illustrations, and contains interesting historical notes on the use and physical properties of the psyllium seed. Valuable suggestions are found also as to the employment of this "ideal laxative."

Primer on Fractures. This office has received a copy of the second edition of "Primer on Fractures," prepared by the Co-operative Committee on Fractures and published by the American Medical Association.

It is aptly termed a "primer," well printed on good paper, illustrated with crude line drawings occupying more than half of each 11½ by 8-inch page. The drawings and legends constitute the chief value of the publication. The object of the sixty-three pages, thirty of which are blank save for the word "Notes," is, according to the Foreword, "to suggest what, in the opinion of the Co-operative Committee on Fractures, constitute acceptable methods of treatment." The blank pages enhance the value of the book and guarantee its usefulness for students who wish to amplify material presented by their teachers.

In this edition several new topics are included, viz.: Compression fracture of the spine; fracture of the skull, and active movements and massage in the treatment of fractures.

Copies may be obtained from the Publication Department of the A. M. A., 535 North Dearborn Street, Chicago, Ill.

Abdomino-Pelvic Diagnosis in Women. By Arthur John Walscheid, M. D. There are three hundred ninety-seven illustrations and one color plate. The volume "is limited strictly to the diagnostic field" and is conveniently "divided into a general and a special section. The former deals with general causal factors, pathologic processes, symptoms and diagnosis, while the latter considers the separate organs—external genitals, vagina, uterus, etc.—from the standpoint of diagnosis." The price of the book is \$12.50 and is published by the C. V. Mosby Company, St. Louis.

The Diagnosis and Treatment of Brain Tumors. By Ernest Sache, A. B., M. D. Two hundred twenty-four illustrations, including ten in colors. The price of the book is \$10.00 and is published by the C. V. Mosby Company, St. Louis.

Clinical Dietetics, a Textbook for Physicians, Students and Dietitians. By Harry Gauss, M. S., M. D., F. A. C. P., Instructor in Medicine, University of Colorado School of Medicine, Assisted by E. V. Gauss, B. A., formerly Assistant Dietitian, Presbyterian Hospital, Denver, Col. The book is illustrated and is priced at \$8.00. C. V. Mosby Company, St. Louis.

An Introduction to Gynecology. By C. Jeff Miller, M. D. "This book is intended solely for the use of beginning students," Dr. Miller explains in his preface. The volume is illustrated and may be purchased for \$5.00. C. V. Mosby Company, St. Louis.

Gonococcal Infection in the Male. By Abr. L. Wolbarst, M. D. Second edition, completely revised and enlarged, with one hundred forty illustrations, including seven color plates. Price, \$5.50. Published by C. V. Mosby Company, St. Louis.

Modern Methods of Treatment. By Logan Clendenning, M. D. Fourth edition. "This book was planned to furnish an outline of all the methods of treatment used in internal medicine." Price, \$10.00. Published by the C. V. Mosby Company, St. Louis.

A Manual of Normal Physical Signs. By Wyndham B. Blanton, B. A., M. A., M. D., Richmond, Va. Second edition. The C. V. Mosby Company, St. Louis.

The Expectant Mother's Handbook. By Frederick C. Irving, A. B., M. D., Professor of Obstetrics, Harvard Medical School; Visiting Obstetrician, Boston Lying-in Hospital. "A book which deals authoritatively, frankly, comprehensively, and simply with everything the expectant mother should know about childbirth." Houghton Mifflin Company, Boston. Price, \$1.75.

Human Sterilization, The History of the Sexual Sterilization Movement. By J. H. Landman, Ph. D., J. D., J. S. D., The College of the City of New York. "This book deals with process of human sterilization as a means of restricting the multiplication of our socially inadequate people in society." The MacMillan Company, New York. Price, \$4.00.



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